Rev. med. vet. Mycol., Vol. 4, Part 3 *September 1961*

381. Watson (K. C.) & Neame (P. B.). **In vitro activity of amphotericin B on strains of Mucoraceae pathogenic to Man.**—*J. Lab. clin. Med.*, **56**, 2, pp. 251–257, 3 fig., 3 tables, 1960.

Isolations of Mucoraceae were made at Dept Path., Univ. Natal, Durban, S. Africa, from 8 human gastro-intestinal ulcers, and once from gastric contents by inoculation on to the surface of 4 ml. sterile bread in the centre of a 9 cm. Petri dish on to which had been poured 15 ml. of melted Sabouraud's glucose agar. Amphotericin B inhibited 4 strs. of *Rhizopus stolonifer* and 2 of *R. microsporus* at 0·03–0·06 mg./ml., 2 further strs. of *R. microsporus* at 0·1–5·0 mg./ml., and a str. of *Mucor hiemalis* (isolated from the gastric contents) at 2·5 mg./ml. Inhibitions appeared to be fungistatic.

382. Campos (E. C.). **Micose de Lutz. Blastomicose Sul-Americana. Contribuïção ao seu estudo no Estado do Rio Grande do Sul.** [South American blastomycosis. Contribution to its study in the State of Rio Grande do Sul.]—Thesis, 221 pp., 93 fig., Libraria do Globo S.A., Porto Alegre, Brazil, 1960.

To date, 102 cases of *Paracoccidioides brasiliensis* infection have been diagnosed in Rio Grande do Sul, Brazil. Almost all aspects of the disease are treated. The author's experience is based on 26 cases of which 23 had oropharyngeal lesions but 22 showed also pulmonary lesions on X-ray examination. It is thought that the initial lesions are usually oropharyngeal but also that the lungs constitute a frequent port of entry and it is emphasized that severe pulmonary lesions usually produce mild symptoms. Sulphamides are effective and in the author's experience sulphamethoxypiridazine should be preferred in slowly progressive cases. The use of amphotericin B is recommended when rapid amelioration is needed [**3**, Nos. 1528, 1845–6].

383. Campos (E. C.). **A propósito de um caso de micose de Lutz de localização genital e de seu tratamento pela sulfametoxipiridazina.** [A case of South American blastomycosis with lesions of the genital organs treated with sulphamethoxypiridazine.]—*An. bras. Derm. Sif.*, **34**, 4, pp. 65–70, 1959.

A record from Rio Grande do Sul, Brazil, of a case of *Paracoccidioides brasiliensis* infection of the scrotum, coronal sulcus, groin, and perineum, followed 3 yr. later by oropharyngeal lesions. Nodular and fibrotic lesions of the lungs were also recorded after X-ray examination, but were almost asymptomatic. Treatment with amphotericin B could not be continued owing to severe side effects, but clinical cure was effected by oral administration of sulphamethoxypiridazine at 0·5 g./day for 10 days and then 0·25 g./day for 4 months [**3**, No. 1848].

384. Tejada-Valenzuela (C.), Lizama (C.), Ordoñez (J. V.), & Castro (F.). **Blastomicosis Sur Americana. Descripción de los dos primeros casos diagnosticados en Guatemala.** [South American blastomycosis. Description of the two first cases from Guatemala.]—*Rev. Col. Méd., Guatemala*, **11**, 1, pp. 7–13, 1960.

The presence of S. American blastomycosis in Guatemala, C. America, has been established. Both patients showed lesions of the tongue, lower lip, and gums and nodular lesions of the lungs. One patient died and lesions of the liver and of the tracheobronchial lymph nodes were seen. *Paracoccidioides brasiliensis* was cultivated from the oropharyngeal lesions of 1 patient. Reference is made to a 3rd, unpublished, case, recorded some years before in Guatemala and showing only oropharyngeal lesions.

385. Norman (W. B.). **Rhinosporidiosis in Texas.**—*Arch. Otolaryng., Chicago*, **72**, 3, pp. 361–362, 1 fig., 1960.

In Apr. 1958 a 3-yr.-old boy was investigated at Longview, Texas, for recurrent nose bleeds. The bleeding came from a round, bluish, 3 mm. mass on the anterior tip of the left inferior turbinate. The small mass was removed surgically and the base cauterized electrically. *Rhinosporidium seeberi* infection was diagnosed from the rounded spores with thick eosinophilic capsules enclosing many daughter spores seen in tissue sections. By Nov. 1959 there had been no recurrence of the lesion.

386. Batista (A. C.), Lima (J. A.), Oliveira (S. D.), & Artagaveytia-Allende (R. C.). **Alguns Hyalopus assinalados sôbre suco gástrico e bile humana no Recife.** [Some species of *Cephalosporium* isolated from the gastric juice and bile of Man in Recife.]—*Atas Inst. Micol., Recife*, **1**, pp. 275–281, 3 fig., 1960. [Engl., Fr. summ.]

Descriptions are given of the following spp. isolated on media containing acromycin: *H.* [*C.*] *acremonium* and *H.* [*C.*] *keratoplasticum*, each isolated once from gastric juices; *H. onychophilus* [*C. onychophilum*] isolated twice and *H.* [*C.*] *serrae* isolated 3 times from bile specimens obtained by duodenal catheterization [**3**, No. 1863].

387. Batista (A. C.), Maia (H. da S.), & Cavalcanti (W.). **Otomicose produzida por Waldemaria pernambucensis n. gen. n. sp.** [Otomycosis caused by *W. pernambucensis*.]—*Atas Inst. Micol., Recife, 1960*, pp. 5–12, 6 fig., 1960. [Engl., Fr. summ.]

An otomycosis is reported from Recife, Brazil, in which the external auditory canal was obliterated by a granulomatous tuft, accompanied by pruritis and partial deafness. A new genus is proposed for the causal organism, a fungus near *Amauroascus* (Eurotiales), which is described. Following surgical removal of the granuloma the patient recovered his normal hearing.

388a. Hofmann (A.). **Die Erforschung der mexikanischen Zauberpilze.** [Investigation on Mexican magic fungi.]—*Schweiz. Z. Pilzk.*, **39**, 1, pp. 1–10, 4 fig., 1961. [16 ref.]

A review of hallucinogenic fungi, especially *Psilocybe* (11 spp.), particularly of *P. mexicana*, and of psilocybin and its effect on man [cf. **4**, No. 221].

b. Matsuda (I.). **Hallucination caused by Psilocybe venenata (Imai) Imazeki et Hongo.**—*Trans. mycol. Soc. Japan*, **2**, 4, pp. 16–17, 1960.

c. Guzmán H. (G.). **Nueva localidad de importancia entomicológica de los hongos neurotrópicos Mexicanos.** [New locality of ento-mycological importance of the Mexican neurotropic fungi.]—*Ciencia*, **20**, 3–4, pp. 85–87, 1 map, 1960.

Records from Necaza, State of Puebla, Mexico, of *Psilocybe mexicana, P. cubensis, P. caerulescens* and its f. *nigripes, P.* (?) *zapotecorum, Panaeolus sphinctrinus, Copelandia cyanexens*, and *Aneltaria sepulchralis*.

389. Van Rossum (J. M.). **Atropine-like actions of muscarine isomers.**—*Science*, **132**, 3432, pp. 954–960, 2 fig., 1960.

A pharmacological study from Roman Catholic Univ. Nijmegen, Netherlands, using rat intestine and frog heart. The results showed that the affinity and intrinsic activity depend on both the molecular structure of the drug and on the receptor.

390. Hyde (H. A.). **Aerobiology and medicine.**—*Nature, Lond.*, **188**, 4746, pp. 182–184, 1960.

A summary of the symposium at the British Ass. (Sect. K), 1960 on 'Botanical

aspects of allergy'. Introducing the symposium D. A. Williams (Asthma & Allergy Unit, Cardiff) stated that some 5% of asthmatics have been found to have asthma caused by fungus spores; especially *Cladosporium*, less frequently *Botrytis* and *Alternaria*. Other aspects of the mould spore population of the air were discussed by M. Richards (Beecham Labs. Ltd.), H. A. Hyde (Nat. Mus. Wales, Cardiff), and Elizabeth Hamilton (Wright-Fleming Inst., London) while R. Harvey (Univ. Coll., Cardiff) described studies into the ecology of *C.* spp., 6 of which are present in the air spora at Cardiff in proportions of 0·2 to 45% of the total. The growth rates of the different spp. vary. Above and below the opt. temp. range (15–20° C.) sporulation is restricted and conidiophore development abnormal. The presence of water droplets in the air markedly accelerates spore liberation. More than 10% of the spores are released in clusters of 30 or more, which later break up into single spores.

391a. Hyde (H. A.) & Williams (D. A.). **Air-borne allergens.**—*Postgrad. med. J.* **35**, pp. 458–462, 2 fig., 1959. [47 ref.]

b. Hyde (H. A.) & Adams (K. F.). **Airborne allergens at Cardiff.**—*Acta allerg., Kbh.*, Suppl. 7, pp. 159–169, 5 fig., 2 tables, 1960. [7 ref.]

c. Hyde (H. A.) & Williams (D. A.). **Atmospheric pollen and spores as causes of allergic disease: hay-fever, asthma and the aerospora.**—*Adv. Sci.*, **17**, 70, pp. 525–533, 2 graphs, 1961.

Three reviews [**2**, No. 1770 and cf. above].

392. Davies (R. R.). **Viable moulds in house dust.**—*Trans. Brit. mycol. Soc.*, **43**, 4, pp. 617–630, 5 fig., 1960.

At St. Thomas's Hosp. med. Sch., London, 53 spp. (27 gen.) of moulds were isolated from house dust from various parts of Britain. The dust spora reflected that of the out-door atmosphere except in the absence of *Cladosporium* which accounted for only 2 of the 1,679 isolates. Colonization of house dust by moulds was investigated by keeping dust samples at different humidities. At R.H. 85% and below the dominant sp. was *Aspergillus repens*, while at higher humidities more spp. developed in an ecological succession.

Differences in the allergenic properties of various dust samples were unrelated to their content of viable mould spores.

393. Hořejší (M.), Šach (J.), Tomšíková (Alena), & Mecl (A.). **A syndrome resembling farmer's lung in workers inhaling spores of Aspergillus and Penicillia moulds.**—*Thorax*, **15**, 3, pp. 212–217, 2 diag., 1960. [32 ref.]

A study by the Clinic intern. Med. and bact. Inst., Plzeň, Czechoslovakia, of a group of industrial workers who worked in high conc. of fungal spores showed that long-term inhalation of moulds (*A. niger*, *A. fumigatus*, *A. flavus*, *Penicillium simplicissimum*, *P. herquei*, *P. rubrum*, *P. caseicolum*, *P. miczinskii*, and *P. italicum*) causes their permanent settling on the mucous membrane of the respiratory tract and the production of specific antibodies against them. The patients, particularly the old ones, developed chronic bronchitis. No mycetoma of the lungs was detected. In most subjects, directly after contact with moulds, a condition resembling the 1st stage of the syndrome of farmer's lung was observed.

394. Baldus (W. P.) & Peter (J. B.). **Farmer's lung. Report of two cases.**—*New Engl. J. Med.*, **262**, 14, pp. 700–705, 4 fig., 1960. [17 ref.]

Candida albicans was isolated from the sputum of both patients, aged 39 and 45 yr. In 1 case a test exposure to the dust of mouldy hay exacerbated the symptoms.

395. **Farmer's lung again.**—*Brit. med. J.*, **1**, 5227, pp. 727–728, 1961. [18 ref.]

A review.

396. Filmer (F. J.). **What do we know about facial eczema now?**—*N.Z. J. Agric.*, **101**, 6, pp. 624–625, 2 col. fig., 1960.

A further review of the disease of sheep caused by *Pithomyces chartarum* [cf. **3**, No. 769].

397. Worker (N. A.) & Dodd (D. C.). **Photosensitivity diseases in New Zealand. XXII. Studies in the effect on the Rabbit of injection of extracts containing facial eczema toxin.**—*N.Z. J. agric. Res.*, **3**, 4, pp. 712–724, 8 fig., 1960. [13 ref.]

At Ruakura Animal Res. Sta., Hamilton, N.Z. [**4**, No. 219] the effects of toxic extracts of *Pithomyces chartarum* administered parenterally in the rabbit, lesions characteristic of facial eczema liver damage, were noted after injection of toxic extracts into the portal system. Macroscopic damage developed 48–96 hr. after injection. The earliest evidence of histological change was observed 3–6 hr. after injection. It is concluded that the toxin is absorbed through the wall of the intestine and transported via the portal circulation to the liver, whence it is removed immediately by the liver cells.

398. Brook (P. J.) & Matthews (R. E. F.). **The production of ^{35}S labelled sporidesmin.**—*N.Z. J. Sci.*, **3**, 4, pp. 591–599, 1 fig., 1 graph, 1960.

At the Plant Dis. Div., D.S.I.R., Auckland, cultures of *Pithomyces chartarum* produced S^{35}-labelled sporidesmin on a medium containing inorganic sulphate (Amersham Code SJS1). The toxin is not confined to the spores in mature cultures, and its production is more sensitive to S-deficiency than are growth and conidial formation. Sporidesmin is unstable in aqueous media in strong light.

399. Hore (D. E.). **Facial eczema.**—*Aust. vet. J.*, **36**, pp. 172–176, 1960. [7 ref. *V.B.*, **31**, No. 238.]

The author (Dept. Agric., Bairnsdale, Victoria) describes clinical and pathological observations on a widespread outbreak of a disease resembling that known in N.Z. as facial eczema which occurred in the autumn in 1959 in E. Victoria [**3**, No. 1678]. High min. air temps., associated with 50 'points' of rain, probably assisted in the development of pasture toxicity. Pathogenicity tests with *Sporidesmium bakeri* [*Pithomyces chartarum*], isolated from Gippsland pastures which had been toxic 2 weeks previously, produced liver damage similar to that of facial eczema in 1 lamb.

400. Bilaĭ (V. I.) (Ed.). Микотоксикозы Человека и сельскохозяйственных животных. [Mycotoxicoses of Man and Farm Animals.]—168 pp., 10 pl., 22 fig., 5 graphs, Kiev, Publishers of the Ukrainian Acad. Sci., 1960. Roubles 8.55. [6 pp. ref. *V.B.*, **31**, No. 363.]

This collection [cf. **2**, No. 2245] of 20 papers is divided into 3 groups entitled, respectively, 'Characteristics and some properties of toxic fungi', 'Mycotoxicoses of man', and 'Mycotoxicoses of farm animals'. Among them, the general papers deal with taxonomic, cultural, biological, and chemical aspects of toxic fungi, and 1 surveys the moulds on meat products (pp. 121–123). Special attention is given to toxicoses caused by *Fusarium* spp. (7 papers), particularly by *F. sporotrichiella* [cf. **3**, No. 783], including studies of its effect on the change of N compounds in rye and wheat proteins (pp. 31–40), the influence of its cultivation on toxin formation (pp. 53–58), the toxic and antibiotic properties of poin (toxin of *F. s.* var. *poae*) (pp. 59–64), the toxicity of its Trans-Baykal strs. (pp. 95–103), and its effect on the

production of toxic substances in late-harvested cereals in the Latvian S.S.R. (pp. 103–107).

Two contributions are on lung mycotoxicoses in man, a general review (pp. 107–115) and experimental data (pp. 115–121).

Another group of papers deals with stachybotryotoxicosis (*Stachybotrys alternans*) [*S. atra*] [cf. **3**, Nos. 1543, 1544] including its laboratory diagnosis (pp. 133–137), its occurrence in horses in S. Ukraine (pp. 137–147), allergic methods for its diagnosis in horses (pp. 147–150), and comparative data on stachybotryotoxicosis in bison and hippopotamus under zoo conditions (pp. 155–160).

Clavicepstoxicosis [paspalum stagger] of animals (*Claviceps paspali*) [loc. cit.] is reported from the Georgian and Azerbaijan S.S.R. and the Krasnodar area. The toxicological and pharmacological characteristics of the sclerotia are given (pp. 150–154).

401. Spesivtseva (Mme N. A.) (Reviewer). Микотоксикозы у животных. [Mycotoxicoses in animals.]—Ветеринария [*Veterinariya*], **37**, 9, pp. 69–72, 1960.

Synopses are given of 9 papers. I. S. Nagornyĭ, M. M. Rossoginskiĭ, A. V. Gvozdov, & Mme N. V. Rybka in a paper 'On mycotoxicoses of cattle' discuss cases caused by *Stachybotrys alternans* [*S. atra*] and indicate therapy. V. P. Sokolov 'The treatment of horses in stachybotryotoxicosis', and S. Khil'ko & D. Kozodub 'An experiment in the prophylaxis and treatment of horses in stachybotryotoxicosis', both relate to the Stalino region. A. F. Gurtsov discusses 'A case of fusariotoxicosis in cattle' relating to the Kustanaĭsk region. A. Geller & N. Suskho deal with 'Large-scale morbidity in animals after eating fodder infected by toxic fungi', including *Aspergillus fumigatus* and *Fusarium sporotrichiella*, in relation to several areas of the Drogobych region of the Ukraine. *Mucor hiemalis* was also isolated. I. E. Aroshevich 'On mycoses of cattle' describes large-scale infection by *S. atra* on a farm in the Zhitomir region, and in a paper 'A case of large-scale infection of cattle by stachybotryotoxicosis' by V. F. Matusevich, M. N. Feklistov, & V. A. Rozhdestvenskiĭ similar infection is described for the Khmel'nitskaya region. Finally S. A. Gortsevskiĭ contributes a study 'Concerning pathogenesis and pathological and anatomical changes in fungus diseases of cows'.

402. Mishustin (E. N.) & Trisvyatskiĭ (L. A.). Микробиология зерна и муки. [The microbiology of grain and flour.]—407 pp., illus., Moscow, Khleboizdat, 1960. Roubles 14.75.

A sect. of this monograph is devoted to 'Mycotoxicoses of animals and man' (pp. 199–214). The principal toxic fungi and the susceptibilities to mycotoxicoses of man and some common farm and domestic animals are tabulated.

403. Shestak (S. S.). Быстрый метод определения токсичности зерновых и комбинированных кормов, пораженных плесневыми грибами. [A quick method for determining the toxicity of cereal and combined fodders infected by mould fungi.]—Ветеринария [*Veterinariya*], **37**, 8, p. 67, 1960. [*V.B.*, **31**, No. 365.]

The following method was used over a 2 yr. period: the oil from 50 g. grain, or 100 g. fodder, is Soxhlet extracted with ethyl ether; 5 ml. of 2N alkali sol. are added per 1–2 drops of the oil and the mixture agitated until a homogeneous emulsion is obtained. 1 ml. ethyl ether is then carefully added along the wall of the test tube. After 10 sec. a brown ring, indicating the toxicity of the grain, appears at the boundary of the 2 phases (ether–water). The colour of the ring increases in intensity if the mixture is allowed to stand. The brown ring is due to the interaction of oil-soluble toxins of cyclopentane-perhydrophenanthrene resulting from the activity of *Fusarium* spp. (including *F. sporotrichioides*). No ring is formed with oil obtained from good quality grain.

404. Kurmanov (I. A.). Фузариотоксикоз Кур. [Fusariotoxicosis in Fowls.]—Ветеринария [*Veterinariya*], **37**, 6, pp. 62–64, 1960. [*V.B.*, **31**, No. 364.]

Sterilized oats were inoculated with *Fusarium sporotrichiella* str. 5750 and kept at 25° [C.] for 20 days. After drying and testing for toxicity by the skin sample method, the grain was fed to fowls. Three experiments were made with 60 Leghorns of different ages and sexes in summer and autumn. Results showed that fowls and especially 3–4 month chickens are highly susceptible, so that they could be used as test subjects in diagnosis.

405. Borisov (A. M.) & Mikhaĭlyukova (Mme N. D.). Патолого-анатомические изменения при микотическом гастроэнтерите Свиней. [Pathological and anatomical changes in mycotic gastro-enteritis of Pigs.]—Ветеринария [*Veterinariya*], **37**, 8, p. 66, 1960. [*V.B.*, **31**, No. 361.]

In Jan.–Feb. 1958 considerable disease and mortality occurred in pigs on a number of farms in the Voronezh region when given low-grade combined fodder, which was found to be heavily infected by *Aspergillus*, *Penicillium*, and *Mucor*. The development of the disease was most rapid and severe in gilts.

406. Joffe (A. Z.). **The mycoflora of overwintered cereals and its toxicity.**—*Bull. Res. Coun. Israel, Sect. D*, **9**, 3, pp. 101–126, 7 fig., 1960.

In studies [cf. **3**, No. 1871] on the etiology of alimentary septic angina in the U.S.S.R. in 1942–7 (here reported from Hebrew Univ., Jerusalem) 192 spp. [which are listed] of fungi and actinomycetes were isolated from cereals overwintered in the field. Toxic fungi, among which *Fusarium poae*, *F. sporotrichioides*, and *Cladosporium epiphyllum* were the most common, developed only when the cereals had passed the winter under snow cover. Skin reactions incited by these fungi resembled the changes caused by extracts from the cereals injected into rabbits. The disturbances in mice, cats, rabbits, and guinea-pigs included extreme leucopenia, lymphocytosis, decline of erythrocyte and haemoglobin content, haemorrhages of mucous membranes, and increased permeability of intestine walls. Toxic properties also appeared in grain experimentally infected with the above spp. *F. poae* and *F. sporotrichioides* are considered to be the chief agents of septic angina.

407. Vickers (C. L.), Carll (W. T.), Bierer (B. W.), Thomas (J. B.), & Valentine (H. D.). **Pulmonary adenomatosis in South Carolina Cattle.**—*J. Amer. vet. med. Ass.*, **137**, pp. 507–508, 1960. [*V.B.*, **31**, No. 1061.]

Pulmonary adenomatosis following the ingestion of mouldy feed is reported from Clemson Coll. Diagnostic Lab., Columbia, S. Carol., to have occurred during the winter of 1959–60 in 9 small herds containing 296 cattle of which 28 were affected (23 died, 5 recovered). All the herds were on pasture (3 on good pasture) and being fed hay; in 3 herds the cases were associated with the feeding of mouldy soybean hay, peanut hay, and sweet potatoes, respectively.

The predominant clinical sign was acute respiratory distress and the outstanding post-mortem finding was pulmonary emphysema. A consistent microscopic finding was hypertrophy and hyperplasia of the pulmonary epithelium. Death occurred within a few hr. up to 5 days. Bacterial isolations from internal organs were negative. No fungi were identified.

408. Chmelíček (J.). **Otrava strmělkou potůčkovou.** [Poisoning with *Clitocybe rivulosa*.]—*C.C.H. mykol. Sborn.*, **38**, 1–2, pp. 15–18, 1 fig., 1961.

A case report from Czeckoslovakia of poisoning, characterized by stomach pain, tear-shedding, sight disturbances, and sweating, but no urge to vomit. The symptoms disappeared after the stomach had been emptied.

409. Lamarche (M.) & Fève (J. M.). **Modifications de la coagulation sanguine au cours de l'intoxication phalloidienne expérimentale.** [Modifications of blood coagulation during the course of experimental phalloidin poisoning.]—*C.R. Soc. Biol., Paris*, **54**, 6, pp. 1279–1281, 1960.

Experiments on the rabbit at the Laboratoire de Pharmacologie, Faculté de Médecine, Nancy, showed that during phalloidin poisoning there was a marked diminution in blood coagulation time due to a reduction in the prothrombin level which appeared to be related to conspicuous lesions of the liver.

410. Kashkin (P. N.), Araviĭskiĭ (A. N.), & Kokushina (Mme T. M.) (Editors). Труды 5-й Ленинградской микологической конференции (микологические исследования). [Proceedings of the Fifth Leningrad Mycological Conference (Mycological investigations).]—309 pp., 2 fig., 4 graphs, Leningrad, S. M. Kirov's Inst. for Further Education of Physicians, 1960. [Engl. summ. 9½ pp. ref.]

Of 47 papers presented at this conference organized by the Mycol. Sect. Leningrad Soc. Dermatologists and the sponsoring institution cited 19 deal with moniliasis [cf. **3**, No. 856] (5 of them specifically with *Candida albicans*), 5 with coccidioidomycosis [cf. **4**, No. 543], 4 with systemic mycoses in general, 4 with trichophytoses (1 with *Trichophyton sulfureum*), 2 with epidermophytosis, 1 each with foot mycoses in children, mycoses of the scalp in association with discoid lupus erythematosus of skin, *Trichosporon* spp., maduromycosis (*Actinomyces* [*Streptomyces*] *madurae*), chromoblastomycosis (*Hormodendrum* [*Phialophora*] spp.), onychomycosis, ophthalmomycosis, and the utilization of keratolytic activity of fungi for their isolation from the soil, respectively. Special note may be made of the contributions by Mme T. M. Kokushina & Mme F. G. Marchenkova (pp. 238–245) on the peculiarities of pathogenic fungi cultivated in chicken embryos, and by Mme M. F. Karpova & Mme V. A. Spokoĭnaya (pp. 275–282) on rhinosporidiosis (*Rhinosporidium seeberi*) (survey and case report).

411. Ajello (L.). **Medical mycology—recent and future trends.**—*Offic. J. Amer. med. Technol.*, **23**, 1, pp. 16–22, 1961.

This review from Dept Health, Education, and Welfare, Atlanta, Ga, lists 21 dermatophytes and 37 other fungi as established pathogens of man.

412. Moss (Emma S.) & McQuown (A. L.). **Atlas of medical mycology.** 2nd Ed., xi+350 pp., 285 fig., Baltimore, Williams & Wilkins Co., London, Ballière, Tindall & Cox, 1960. 88*s*.

This atlas [cf. **2**, No. 441] has been enlarged, and terminology and methods of diagnosis and treatment have been brought up to date. Aspergillosis, geotrichosis, mucormycosis and penicilliosis are now discussed in separate chapt. and there is also a new chapt. on special stains for fungi in tissue.

413. Balabanov (V. A.). Биологични въпроси на микологията. [Biological problems of mycology.]—164 pp., 4 col. pl. (10 fig.), 81 fig., Sofia, State Publishers 'Meditsina i fizkultura', 1960. [Engl. summ. pp. 149–154. 8½ pp. ref.]

Most of this book is devoted to a consideration of the dermatophytes with special emphasis on their classification, host–parasite relationships, ability to produce pigments and antibiotics, and the transition from saprophytism to parasitism. *Microsporum gypseum* and *M. lanosum* [*M. canis*] are claimed as new records for Bulgaria.

In addition there are sections on moniliasis and systemic mycoses.

414. Niño (F. L.). **Lecciones de micología y micopatología médica.** [Lessons on medical mycology and mycopathology.]—Buenos Aires, Ed. Cajica S.A., 486 pp., 184 fig., 1960.

The author, Assistant Professor of Microbiol. and Parasitology, Sch. Med., Univ. Buenos Aires, has written this book for Spanish-speaking physicians and students. The 1st part on general mycology has 4 chapt.: Introductory and classification; Morphology and biology; Saprophytic and parasitic fungi; Methods for the study of the pathogenic fungi. The 2nd part comprises 20 chapt. on mycoses. Some chapt. comprise clinical groupings (e.g. chapt. 6 covers tinea capitis, black piedra, white piedra, and trichomycosis axillaris); on the other hand all forms of moniliasis are in one chapt. There is a chapt. on allergy and a brief one on antibiotics produced by fungi. Each chapt. is followed by references, the Argentine literature being listed separately. Most of the illustrations are original. Indexes of authors and subjects are appended.

415. Batista (A. C.), Silveira (G. L.), De Oliveira (S. D.), & Coelho (R. P.). **Fungos das paredes do apêndice cecal humano.** [Fungi from the walls of the human appendix.]—*Hospital* (*Rio de J.*), **58**, 3, pp. 555–558, 1960. [Engl., Germ. summ.]

Of 80 human appendixes examined at Univ. Recife, Brazil, 40 exhibiting chronic inflammation contained fungi. The 18 spp. of fungi (*Candida albicans* 6 times) and 4 actinomycetes isolated are tabulated. Of 19 cases of acute appendicitis examined none contained fungi, which is taken to indicate a close correlation between the fungi and chronic appendicitis.

416. Gregson (A. E. W.) & La Touche (C. J.). **Otomycosis : a neglected disease.** —*J. Laryng.*, **75**, 1, pp. 45–69, 11 fig., 1961.

In this survey from the General Infirmary, Leeds, of 180 patients examined during 1956–59, 83 were found to have a fungus infection, 62 infections of the external auditory meatus and 21 infections in radical mastiodectomy or fenestration cavities. The fungi found were predominantly *Aspergillus* and *Candida* spp.; especially *A. fumigatus* (15 times), *A. niger* (20), *C. albicans* (18). Neither *Penicillium* nor *Mucor* was recorded.

The clinical picture is redescribed. One symptom that has occurred with some constancy is a sensation of irritation which may be almost intolerable. In otitis externa pain is unusual unless there is an associated pyogenic infection. The meatus is rarely swollen. In the acute stage it is filled with a mass of grey caseous debris. Removal of this debris shows a meatal lining of a distinctive magenta colour covered with small, glistening, white masses. In less acute cases of *Aspergillus* infection the meatus is noticeably dry and the magenta colour less evident; conidiophores may be seen. *Candida* infections more nearly resemble acute cases after cleaning; the meatus is moist with small white aggregations. All these features necessitate examination with the electric magnifying auriscope.

The use of a nystatin/boric acid powder (10^5 units/g.) was a successful therapy.

417. Jenkins (B. H.). **Treatment of otitis externa and swimmer's ear.**—*J. Amer. med. Ass.*, **175**, 5, pp. 402–404, 1 fig., 1961.

At 8 Lee St., Newman, Ga, 200 patients with bacterial or fungal infections of the external ear responded satisfactorily to treatment with VosoL Otic (1,2-propanediol diacetate 3%, acetic acid 2%, benzethonium chloride 0·02%, propylene glycol q.s. ad 100·0). In *in vitro* studies the preparation killed all test fungi in 30 sec.

418. Verkholomov (E. E.). Методика получения гемокультур некоторых гифальных грибов из крови раковых больных. [Methods for the acquisition

of haemocultures of some hyphal fungi from the blood of cancer patients.]—*Bot. Zh. S.S.S.R.*, **46**, 3, pp. 357–360, 1961.

It is reported from the Mycol. Sect., All-Union bot. Soc., Leningrad, U.S.S.R., that 30 strs. (9 *Stachybotrys* spp., 18 *Cephalosporium* spp., 3 others) were isolated from the blood of 100 patients with cancer of various organs.

419. Longo (Louise B.), Harbuck (Alice B.), & Fleischmann (W.). **Coexistence of fungi and tubercle bacilli.**—*Dis. Chest*, **33**, 4, pp. 398–400, 1958. [Span., Fr., Germ. summ.]

At the Veterans Administration Hosp., Memphis, Tenn., during an 11-month period, 3 sputum samples were examined from each of 505 newly admitted patients. The data (which are tabulated) showed 54·8% to be positive for fungi and 28·1% positive for tubercle bacilli and fungi. *Histoplasma capsulatum* was isolated from 4 patients negative for tubercle bacilli; *Cryptococcus neoformans* and *Geotrichum candidum* were each associated once with *Mycobacterium tuberculosis*.

420. Berdnikoff (G.), Dupal (Marie F.), & Poirier (R.). **Infection mycosique double compliquant un cas de leucémie lymphoide aplastique.** [Double mycotic infection complicating a case of aplastic lymphoid leucaemia.]—*Canad. med. Ass. J.*, **83**, 26, pp. 1370–1374, 6 fig., 1960. [Engl. summ. 23 ref.]

The fungi concerned in this case, an 8-yr.-old boy at the Hôpital Sainte-Justine, Montreal, were spp. of *Candida* and *Aspergillus*. The clinical features and autopsy findings are described and discussed, with emphasis on the close relationship between generalized mycoses and the risk of 'over-treatment' with antibiotics and steroids.

421. Louria (D. B.), Fallon (Nancy), & Browne (H. G.). **The influence of cortisone on experimental fungus infections in Mice.**—*J. clin. Invest.*, **39**, 9, pp. 1435–1449, 6 fig., 6 graphs, 1960. [30 ref.]

In the experiments herein jointly reported from Bellevue Hosp., N.Y., Nat. Inst. Allergy, Bethesda, Md, and N.Y. Hosp., Cornell med. Center, N.Y., renal infection by *Candida albicans* in mice was markedly enhanced by subcutaneous or intraperitoneal injection with cortisone to a far greater degree than were those by *Histoplasma capsulatum* or *Cryptococcus neoformans*. The results of histological studies indicated a relationship between the localization of infection in the kidneys of both normal and cortisone-treated mice and irruption of *C. albicans* into the tubular lumens. Once within the tubule the pathogen appeared to be protected from the host defences, growing without inhibition. Extensive intra-tubular residence was uncommon in normal mice infected with 10^5–5×10^6 cells but occurred uniformly in the treated group. The max. effect of cortisone was produced by inception of the treatment from 2 days before infection.

422. Chick (E. W.). **Acridine orange fluorescent stain for fungi.**—*Arch. Derm., Chicago*, **83**, 2, pp. 305–309, 3 fig., 1961.

A note from the Duke Univ. Hosp., Durham, N. Carol., on an acridine orange (1: 1,000–10,000) staining method (which is detailed) for preserved and fresh material suitable for diagnostic work, the study of the morphology of yeast and mycelial phase fungi, and possibly of the effect of antifungal preparations on fungi. With the addition of inexpensive filters any compound microscope and light source can be adapted for fluorescent work utilizing blue-violet light.

423. Friedrich (E.) & Umlauf (H.). **Die Kontrastfärbung nach Swartz und Coolidge, ein wertvolles Hilfsmittel bei mykologischen Untersuchungen.** [Contrast

staining according to Swartz and Coolidge, a valuable aid in mycological examinations.]—*Mykosen*, **4**, 1, pp. 1–6, 4 col. fig., 1961.

An account of the phloxin-aniline blue staining technique used by the Universitäts-Hautklinik, Halle/Saale, Germany.

424. Heidenbluth (Ingeburg). **Milben in Dermatophytenkulturen.** [Mites in cultures of dermatophytes.]—*Derm. Wschr.*, **143**, 10, pp. 244–249, 7 fig., 1961.

Contamination by *Tarsonemus fusarii* and an unknown sp. is reported from the Medizinische Akademie 'Carl Gustav Carus', Dresden. The former proved exceedingly resistant to chemical treatment, and the most effective control method was found to be regular inspection of the cultures and destruction of infected tubes.

425. Buchanan-Davidson (Dorothy J.), Deese (D. C.), Uritani (I.), & Stahmann (M. A.). **Effect of synthetic polylysine on fungi.**—*Science*, **132**, 3440, pp. 1664–1666, 2 fig., 1960.

At Univ. Wis., Madison, the synthetic basic poly-α-amino acid, polylysine (M. Sela & E. Katchalski, *Advanc. Protein Chem.*, **14**, p. 391, 1959), inhibited spore germination and vegetative growth of *Trichophyton mentagrophytes* and *T. rubrum* at 100 μg./ml. of difco Sabouraud dextrose agar and gave 50% inhibition of germination and growth of *Candida albicans* at the same conc.

426. Haler (D.) & Aebi (A.). **A new, highly effective but non-toxic antibacterial substance.**—*Nature, Lond.*, **190**, 4777, pp. 734–735, 1961.

At 101, Harley St., London, and Geistlich Sons Ltd., Wolhusen, Germany, 'anaflex', a polycondensed urea-formaldehyde of low solubility (0·24–0·31%) in water, has been found to be effective *in vitro* and *in vivo* against *Candida albicans* and dermatophytes (unspecified).

427. Thrum (H.). **Eine neue, von einer Spezies der Streptomyces-reticuli-Gruppe gebildete Antibiotikakombination.** [A new antibiotic combination formed by a sp. of the *S. reticuli* group.]

Thrum (H.) & I-Dschang Dscho. **Die Antibiotika 2814P and 2814H, zwei neue antifungale Polyen-Antibiotika.** [The antibiotics 2814P and 2814H, two new antifungal polyene antibiotics.]—*Naturwissenschaften*, **46**, 2, p. 87, 1959; **47**, 20, p. 474, 1960.

The 2 antibiotics (2814H, 2814P) are yellow compounds closely similar to the polyene compounds already described in their antifungal properties, solubilities, and UV absorption. The following are their min. inhibitory concs. (in μg./ml.) by the agar diffusion plate test: *Candida albicans* 2814H 3, 2814P 6; *C. tropicalis* 6 and 12; *S. cerevisiae* 3 and 6; *A. niger* 12 and 25; *P. notatum* 3 and 6; and *Scopulariopsis* sp. $>$ 50 and $>$ 50.

428. Laborie (Mme F.) & Laborie (R.). **Signification et portée immunothérapeutique de l'allergie croisée tuberculine, microbienne et mycosique.** [Significance and immuno-therapeutic consequences of allergic cross-reactions to tuberculous, bacterial and fungal organisms.]—*J. Méd. Bordeaux*, **137**, 4, pp. 370–375, 1960.

This article summarizes the conclusions drawn from much previous work at the Laboratoire de Recherches d'Allergo-immunologie, 4 boulevard Maine-de-Biran, Bergerac, Dordogne. Part of the evidence which suggests to the authors that many microbial antigens have a common biochemical base is that all subjects with trichophytosis of the skin who react to trichophytin, also react to tuberculin and to bacterial (staphylococcal) antigens. From this and other evidence it is suggested that infection with any one of these groups of organisms can produce immunity from the other two.

429. Teng (P.). **Actinomycotic cerebral abscess. A report of two cases with recovery.** —*J. Amer. med. Ass.*, **175**, 9, pp. 807–810, 1961.

Two cases of *Actinomyces bovis* [*A. israelii*] brain abscess, in a 45-yr.-old man and a 49-yr.-old woman, successfully treated by surgery and penicillin therapy, are described from Kaiser Foundation Hosp., Los Angeles, and contrasted with 6 other cases reported in the literature 1949–58 [**3**, No. 1110j].

430. Schwartz (D. G.) & Christoff (N.). **Actinomycosis with cerebral and probable endocardial involvement.**—*J. Mt. Sinai Hosp., N.Y.*, **27**, 1, pp. 23–27, 1960.

A case is reported of a 64-yr.-old male patient exhibiting a mass in the upper right quadrant, marked anaemia, grade-III systolic murmur, and a low-grade fever, followed by acute cerebral involvement attributed to embolization. The spinal fluid yielded *Actinomyces bovis* [*A. israelii*]. A full recovery was made after a course of therapy with tetracycline, Na penicillin G, and gantrisin.

431. Biggs (J. S. G.). **Actinomycosis of the liver : a report of two cases.**—*Med. J. Aust.*, **47** (ii), 24, pp. 939–940, 1960.

At the Royal Melbourne Hosp. *Actinomyces israelii* was demonstrated by anaerobic culture of the pus as the agent of severe intra-abdominal suppuration in 2 male patients, aged 37 and 14, both of whom were completely cured by surgical drainage of the abscesses and a prolonged course of therapy with penicillin in high dosage.

432. Mullan (D. P.). **An unusual case of actinomycosis.**—*J. roy. Army med. Cps*, **106**, 4, pp. 171–175, 1960.

A clinical report from Queen Alexandra Military Hosp., London, on a 47-yr.-old patient with predominantly renal infection by *Actinomyces bovis* [*A. israelii*], complicated by coincident pulmonary tuberculosis and gall stones. Although 5 operations were performed, the apparently complete cure is attributed to a 7-month course of penicillin therapy (total of 1,000 mega units).

433. Bramley (P.) & Orton (H. S.). **Cervico-facial actinomycosis. A report on eleven cases.**—*Brit. dent. J.*, **109**, 6, pp. 235–238, 5 fig., 1960.

Actinomyces bovis [*A. israelii*] was isolated from the pus of abscesses in all the cases herein reported from the S. Devon and E. Cornwall Hosp., Plymouth, 6 of which were indistinguishable clinically from pyogenic abscesses. Cervico-facial actinomycosis is believed to be commoner than generally supposed, meriting consideration in the differential diagnosis of all lumps in the lymph gland area. Satisfactory resolution was accomplished in every case by the administration of tetracycline in 6-hourly doses of 250 mg. for 3–5 weeks, combined with drainage.

434. Hidalgo (W.), De Hidalgo (Hilda X.), Cappelia (E.), & Solano (E.). **Un caso de actinomicosis cérvicofacial por Actinomyces bovis.** [A case of cervico-facial actinomycosis caused by *A. israelii*.]—*Rev. Biol. trop., S. José*, **8**, 2, pp. 155–163, 2 pl. (9 fig.), 1960. [Engl. summ.]

At Hosp. San Juan de Dios, San José, Costa Rica, the 1st case in the country has been recorded. There was improvement after surgical treatment and administration of griseofulvin.

435. Grässer (R.). **Pathogenitätsteste mit anaeroben Actinomyceten.** [Pathogenicity tests with anaerobic Actinomycetes.]—*Zbl. Bakt.*, Abt. 1 (*Orig.*), **181**, 1, pp. 103–110, 1 fig., 1961. [Engl., Fr., Span., Russ. summ. 19 ref.]

At the Institut für Veterinär-Mikrobiologie, Karl-Marx Univ., Leipzig, Germany, 28 strs. of diverse origin were inoculated into Syrian hamsters. All the 8 strs. of

Actinomyces israelii isolated from typical human cervico-facial actinomycosis proved highly pathogenic, irrespective of whether they originated shortly before the experiments or 1½ yr. earlier. In tests with 7 strs. the same results were obtained with injections administered either in saline or liquid nutrient medium, all but 1 of the 32 animals dying after a mean period of 3 months.

All the other strs. were innocuous to hamsters, even those barely differentiable by their morphological and cultural characters from *A. israelii*, of which they are considered to be ecological variants, and the isolates pathogenic to swine and cattle.

436. Murray (J. F.), Finegold (S. M.), Froman (S.), & Will (D. W.). **The changing spectrum of nocardiosis. A review and presentation of nine cases.**—*Amer. Rev. respir. Dis.*, **83**, 3, pp. 315–330, 7 fig., 1961. [Span., Fr. summ. 38 ref.]

A review from Dept Med., Univ. Calif., Los Angeles, and other centres, of the fundamental aspects of nocardiosis, emphasizing diagnostic methods and treatment, with reports of 9 cases (6 *Nocardia asteroides*, 2 *N.* spp., 1 not cultured), demonstrating its association with underlying disorders of the immune mechanism and with adrenocortical-steroid therapy. The most common form was bronchopneumonia; 3 patients had generalized infection with brain abscesses.

437. Raich (R. A.), Casey (Frances), & Hall (W. H.). **Pulmonary and cutaneous nocardiosis. The significance of the laboratory isolation of Nocardia.**—*Amer. Rev. respir. Dis.*, **83**, 4, pp. 505–509, 4 fig., 1961. [Span., Fr. summ. 10 ref.]

Reports from the Dept Med., Univ. Minn. med. Sch., Minneapolis, of 6 cases of *Nocardia* [unspecified] infection associated in 5 with pulmonary sarcoidosis, alveolar proteinosis, carcinoma, tuberculosis or Hodgkin's disease. Treatment with sulphadiazine was successful in 3 cases. *Nocardia* spp. were not found as saprophytes in the respiratory tracts of 109 patients with tonsillitis and other respiratory diseases, and are rare laboratory contaminants.

438. Henderson (J. W.), Wellman (W. E.), & Weed (L. A.). **Nocardiosis of the eye : report of case.**—*Proc. Mayo Clin.*, **35**, 21, pp. 614–618, 3 fig., 1960. [*B.H.*, **36**, p. 133.]

Report on the clinical course of a 49-yr.-old female patient with superficial granuloma of one eye caused by *Nocardia asteroides* (identified by culture), and on the very favourable results of systemic treatment with sulphadiazine and topical applications of Na sulphacetamide.

439. Frost (A. J.). **A review of canine and feline nocardiosis with the report of a case.**—*Aust. vet. J.*, **35**, pp. 22–25, 1959. [21 ref. *V.B.*, **29**, No. 3108.]

The author reports a case in a male greyhound, aged 2 yr., at Queensland Univ. Vet. Sch. clinic in 1955. Streptomycin and supportive therapy was unsuccessful, and the dog was destroyed after 16 days. Post-mortem findings showed that the lesions were confined to the thoracic cavity. There were adhesions between the lung and the chest wall, with small, brownish foci in a fibrinous deposit. Some soft, brownish granulation tissue was present. The thorax contained a brownish exudate with yellowish-green granules up to 1 mm. diam. Round, greyish lesions up to 2 cm. diam. were present in the lung tissue. The lymph nodes were enlarged but not suppurating. The pericardium was up to 3 cm. thick near the apex, and the epicardium was covered with small nodules of granulation tissue; there were many adhesions in the pericardium. A Gram+ aerobic actinomycete isolated from granules in the pleural cavity, the cultural characters of which are described, was identified as *Nocardia asteroides*.

440. Ajello (L.), Walker (W. W.), Dungworth (D. L.), & Blumfield (Gladys L.). **Isolation of Nocardia brasiliensis from a Cat with a review of its prevalence**

and geographic distribution.—*J. Amer. vet. med. Ass.*, **138**, 7, pp. 370–376, 6 fig., 1961. [43 ref.]

A report from Communicable Disease Center, Atlanta, Ga, and other centres, of *N. brasiliensis* infection of lacerations on the legs of a male castrated cat in California. Treatment with 5 gr. KI daily *per os* and 150,000 units each of benzathine penicillin G and procaine penicillin G every other day was ineffective. Post mortem findings included nocardial cellulitis, myositis, and obstructive jaudice.

The ability of *N. brasiliensis* to digest casein and grow well on dilute gelatin sol. has been found useful for differentiation of this sp. from *N. asteroides*.

441. Awad (F. I.). **Nocardiosis in the Dog in the Sudan.**—*Zbl. VetMed.*, **6**, pp. 919–924, 5 fig., 1959. [Germ., Fr., Sp. summ. *V.B.*, **30**, No. 2147.]

A study is reported of 2 fatal cases at the Res. Div., Min. of Animal Resources, Khartoum, Republic of the Sudan, 1 in a 15-months-old male Alsatian, the other in a 4-months-old pup. From each, *Nocardia asteroides* var. *gypsoides* was isolated. The organism was sensitive to chloromycetin and terramycin, but not to tetracyn; it was sensitive also to penicillin, simultaneous inoculation of 10,000 units+1 ml. of virulent culture inhibiting its effects on rabbits and guinea-pigs. Only 7 cases of nocardiosis in the dog have been recorded in the Sudan since 1942, including these two.

442. Green (H. F.). **Streptothricosis in Zebra and Donkeys and demodectic mange in Eland in Kenya.**—*Vet. Rec.*, **72**, p. 1098, 1960. [Letter.] [*V.B.*, **31**, No. 1067.]

Writing from Vet. Res. Lab., Kabete, Kenya, the author states that examination of dried skins led to the identification of streptothricosis [*Dermatophilus congolensis*] in zebra and donkeys and of demodectic mange in eland. The cases of streptothricosis were mild, and were characterized by small scabs near the backbone line of the donkey skins and the flanks of the zebra. The presence of streptothricosis was confirmed by making smears from the scabs and staining them by Gram's method, which revealed the typical segmented filaments.

443. Gorbovitskiĭ (S. E.). (Ed.). Вопросы общей патологии, клиники и лечения дерматозов. [Problems of general pathology, clinic, and treatment of dermatoses.]—328 pp., numerous illus., Leningrad, Medgiz, 1958. Roubles 15.30.

In the sect. [Problems of Mycology] (pp. 287–326), P. N. Kashkin reports [On the antibacterial properties of the dermatophytes] (pp. 287–291). The most active bacteriostatic and bacteriocidal substances tested against staphylococci were obtained from *Epidermophyton* [*Trichophyton*] *rubrum*, *Trichophyton gypseum* [*T. mentagrophytes*], *Epidermophyton* Kaufmann-Wolf [*T. interdigitale*], and *Microsporum ferrugineum*. P. N. Kashkin, Mme M. N. Kozeletskaya, & V. A. Tsyganov on [The biology of *M. ferrugineum*] (pp. 293–298) record the inhibition of Gram+ bacteria by ferruginin which differs from the penicillin-like antibiotics, and from antibiotics from other dermatophytes. Mme A. A. Kondrat'eva presents a study on [The reaction of the animal body to the repeated intracutaneous introduction of some yeast and yeast-like organisms] (pp. 299–303), in which *Saccharomyces* spp., *Candida albicans*, *C. tropicalis*, and *C. pseudotropicalis* were used. Repeated inoculation caused a local inflammatory reaction, differing substantially from the reaction to initial inoculation. Mme A. P. Bazyka, in [Clinical aspects of trichophytia caused by *T. verrucosum*] (pp. 304–308), from observations of 78 cases during 1949–53 confirms that *T. album* and *T. discoides* are variants of one fungus. I. M. Shcherbakov presents a study entitled [The first case of epidermophytia caused by *Epidermophyton* [*T.*] *rubrum* detected in the Soviet Union in 1938] (pp. 309–311) on a 17-yr.-old schoolboy in Leningrad. Mme L. D. Sviderskaya in [Combined disseminated moniliasis and trichophytia caused by *T. violaceum*] (pp. 312–313) discusses the case of a girl born in 1947 with initial infection at 1 yr. 1 month,

with progressive development for 5 yr. Unspecified dermatophyte and yeast infections are discussed by Mmes S. A. Krastelevskaya & E. Yu. Oznobishina in [Onychomycoses and their treatment] (pp. 314–317).

444. Biguet (J.), Cochet (G.), Deblock (S.), Andrieu (S.), & Duc (G.). **Les affinités taxonomiques de quelques Trichophyton africains, agents de tondantes microsporiques on trichophytiques.** [Taxonomic affinities of some African *T.* species, agents of microsporoses and trichophytoses.]—*Ann. Parasit. hum. comp.*, **35**, 3, pp. 409–425, 12 fig., 1960. [39 ref.]

From an examination, at the Laboratoire de Parasitologie, Faculté de Médecine et Pharmacie de Lille, of a large number of dermatophytes from Africa, it is concluded that: *T.* [*Microsporum*] *ferrugineum* and *T. soudanense* are distinct spp.; *T. gourvilii* should be considered a synonym of *T. soudanense* and not of *T. violaceum*; white *T.* strs. isolated from Chad, considered at first to be *T. tonsurans*, are atypical forms of *T. soudanense*; and *T. yaoundei* [**3**, No. 343] is distinct from *T. violaceum* and after 3 yr. in culture shows similarities to *T. soudanense*.

445. Oliveira (P. P.). **Micoses superficiais no meio militar.** [Superficial mycoses in the army.]—*Hospital* (*Rio de J.*), **58**, 6, pp. 1187–1189, 1960.

At the Hosp. Central do Exército, Rio de Janeiro, Brazil, superficial mycoses constitute 15·1–22·3% of the diseases of the skin.

446. Castro (A. M.), Castro (R. M.), Neto (E. A.), & Proença (N.). **Tinea capitis em adultos. Relato de 4 casos.** [Tinea capitis in adults. Report of 4 cases.]—*Rev. Hosp. Clin. Fac. Med. S. Paulo*, **15**, 5, pp. 331–334, 1960.

Two cases were due to *Microsporum canis*, 1 to *Trichophyton tonsurans*, and 1 to *T. violaceum*.

447. Lü (Y. C.). **[Dermatophytosis among the students of the primary schools in Taipei City.]**—*J. Formosan med. Ass.*, **58**, 7, pp. 431–436, 1959. [In Chin. Engl. summ. *Biol. Abstr.*, **36**, No. 5152.]

A survey of 2,687 children at primary schools, Taipei City, Apr.–June, 1957, revealed 85 cases (3·16%) of fungus diseases (80 tinea capitis; 78 male). Among 46 isolates from tinea capitis were 39 of *Trichophyton* [*Microsporum*] *ferrugineum*, 6 *T. violaceum*, and 1 *T. rubrum*.

448. Langer (H.) & Conrad (M.). **Trichophytien im Berliner Raum 1955–1959.** [Trichophytoses in the Berlin area, 1955–59.]—*Mykosen*, **4**, 1, pp. 29–37, 1961.

It is reported from the Hautklinik der Charité der Humboldt-Universität, Berlin, that trichophytoses represented 6·5% of all dermatomycoses during the period reviewed (*Trichophyton mentagrophytes*, 50·0%; *T. verrucosum*, 35·6%; *T. tonsurans*, 3·4%; *T. megninii*, 11·0%).

449. Olsen (C. D.) & Quist (K. D.). **A ringworm epidemic caused by Microsporum canis in a rural community.**—*J. Amer. vet. med. Ass.*, **137**, 5, pp. 291–292, 1960.

Notes from Div. Communicable Disease Control, Lincoln, Nebraska, on an epidemic in 1957 of *M. canis* infection in a community of approx. 850 persons. Of 23 households affected 13 had either cats or dogs on the premises and 5 gave histories which might incriminate pets. A high degree of person-to-person spread was indicated.

450. Catanei (A.) & Amar (R.). **Premières observations de teigne microsporique au Sahara.** [First observations on microsporic tinea in the Sahara.]—*Arch. Inst. Pasteur Algér.*, **38**, 3, pp. 349–352, 1960.

A cat was shown to be responsible for the transmission of infection by *Microsporum*

canis to 13 children, aged 2 months–7 yr., from Oct. 1959 to Mar. 1960—the 1st record of microsporosis after a 32-yr. study of local tineas.

451. Alsop (J.) & Prior (A. D.). **Ringworm infection in a cucumber greenhouse.**—*Brit. med. J.*, **1**, 5232, pp. 1081–1083, 1961.

An epidemic of ringworm of the glabrous skin affecting 22 patients of both sexes and a wide range of ages and caused by *Microsporum gypseum*, a perfect state of which, *Nanizzia incurvata* [**4**, No. 302], was isolated from the soil of the greenhouse and nearby pasture by J. C. Gentles and Miss C. O. Dawson using the hair bait technique, is described from Warwickshire. It is concluded that *M. gypseum* was introduced in pasture soil into the greenhouse where its growth was encouraged by frequent top-dressings of hoof-and-horn fertilizer. Attempts to isolate dermatophytes from the fertilizer were unsuccessful.

452. Gokhalay (B. B.), Padhye (A. A.), & Thirumalachar (M. J.). **Trichophyton violaceum infection of the scalp in Poona (India).**—*Mycopathologia*, **14**, 1, pp. 57–63, 5 fig., 1961. [10 ref.]

A report on 34 cases (all male, 5–14 yr.) of ringworm of the scalp (*T. violaceum*) studied at Sassoon Hosp., Poona, India, is presented. Infection was most prevalent in children during Feb.–June. Symptomatically, the cases fell into 5 clinical types: scaly, crusted, superficial patches; black dot appearance; pustular inflammatory lesions; kerion, and partial alopecia. Most of the infected boys were undernourished.

453. Ettig (B.). **Mäusetrichophytie als Ursache einer tiefen Trichophytie bei einer Tierpflegerin. Kasuistische Mitteilung.** [Trichophytosis in a Mouse as cause of a deep trichophytosis in a female animal attendant. Case report.]—*Berufsdermatosen*, **9**, 1, pp. 22–26, 4 fig., 1961. [Engl., Fr. summ. 11 ref.]

The fungus isolated both from the right forearm of the 53-yr.-old patient and a white mouse under her care at the Universitäts-Hautklinik, Jena, Germany, was *Trichophyton mentagrophytes* var. *asteroides* [*T. mentagrophytes*].

454. Blank (F.), Leclerc (G.), & Telner (P.). **Clinical manifestations of Mouse favus in Man.**—*Arch. Derm., Chicago*, **83**, 4, pp. 587–595, 13 fig., 1961. [27 ref.]

A report from Dept Bact., McGill Univ., Montreal on cases of *Microsporum* [*Trichophyton*] *quinckeanum* infection in mice and man in the St. Lawrence valley [**3**, No. 237; **4**, No. 88]. In man isolated cases and family epidemics were found. Lesions were of 2 types: slightly raised, erythematous lesions covered by small scales, or infiltrated plaques covered with small, sulphur yellow scutula. A generalized infection was seen in a 17-yr.-old youth whose scalp and face were covered with scutula.

455. English (Mary P.), Gibson (Mary D.), & Warin (R. P.). **Studies in the epidemiology of tinea pedis. VI. Tinea pedis in a boys' boarding school.** English (Mary P.). **Id. VII. The circulation of infection.**—*Brit. med. J.*, **1**, 5232, pp. 1083–1086; 1086–1089, 3 fig., 1961.

In the 1st of these further studies from the Bristol Royal Hosp. [**4**, No. 36] an account is given of the results of 2 examinations (Oct. 1958 and June 1959) for tinea pedis of 212 pupils of a boys' boarding school. The percentages with lesions at the 1st and 2nd visits were 52 and 68, respectively; the percentages infected 22 and 18. Infection was usually with *Trichophyton mentagrophytes*, interdigitale type, but *T. rubrum* was also isolated. Of 11 lesion-free 'carriers' seen on the 1st visit only 1 was still carrying the fungus on lesion-free feet 8 months later: this suggests that true carriers are rare, most apparent ones having incipient or healing infections.

The 2nd paper assesses the relative importance of latent endogenous and exogenous sources of infection in determining outbreaks of tinea pedis. After critically examining claims that the disease is not transmissible in the ordinary sense the author concludes that the majority of outbreaks are due to exogenous infection and from the data of previous work [loc. cit.] suggests the routes by which the disease, as caused by *Trichophyton mentagrophytes* and *T. rubrum* respectively, circulates in the Bristol area.

456. Götz (H.) & Elsner (M.). **Untersuchungen über den Einfluss von Strümpfen aus Polyamidfasern auf die Tinea (Epidermophytia) pedis.** [Investigations on the effect of stockings of polyamid fibres on tinea pedis.]—*Mykosen*, **4**, 1, pp. 6–18, 1961.

The data obtained at the Dermatologische Klinik und Poliklinik, Univ. Munich, Germany, indicate that the use of such stockings favours the incidence of foot mycoses.

457. Polemann (G.). **Fussmykosen in Badeanstalten.** [Foot mycoses in bathing establishments.]—*Dtsch. med. Wschr.*, **84**, 34, pp. 1490–1491, 1959. [13 ref.]

A review.

458. Pock-Steen (B.). **Trichophytonarter ved tinea pedis.** [*Trichophyton* spp. in tinea pedis.]—*Nord. Med.*, **65**, 8, pp. 261–264, 1961. [Engl. summ.]

Information is presented on the epidemiology, clinical symptoms, and mycology of *T. rubrum* and *T. mentagrophytes*, emphasizing the increasing frequency of the former during the past 20 yr. This is followed by a report of the author's 3-month study of 7 cases of infection by *T. rubrum* and 1 by *T. mentagrophytes* among 10 patients at the Kommunehospital, Copenhagen, with chronic tinea pedis. There were 2 atypical strs., 1 of *T. rubrum* which formed a few perforations in culture on hair, and 1 of *T. mentagrophytes* characterized by absence of pigmentation and numerous perforations in hair culture.

459. La Touche (C. J.). **Fungi as skin parasites of domestic pets.**—*Advances in Small Animal Practise*, **2**, pp. 90–92, 8 fig., 1961.

A review with special reference to dermatophytes.

460. Tedeschi (A.) & Zappa (A.). **Dermatomicosi in patologia canina.** [Dermatomycoses in canine pathology.]—*Clin. vet. Milano*, **82**, 5, pp. 161–168, 10 fig., 1959. [16 ref.]

The authors describe studies at Ist. Pat. spec. e Clinica med. vet., Univ. Milan, on 46 cases, 9 of tinea corporis (*Trichophyton radians* or *T. caninum*), 15 of favus (*Achorion* sp.), and 22 of microsporosis (*Microsporum canis*). Methods of diagnosis are briefly noted, and the paper concludes with a note on treatment with a tincture containing basic fuchsin, phenol, resorcin, etc.

461. Rieth (H.). **'Die neuzeitliche Erkennung und Behandlung der Dermatomykosen unter besonderer Berücksichtigung der Therapie mit Griseofulvin.' (Bericht über das mykologische Symposium anlässlich der 25. Tagung der Deutschen Dermatologischen Gesellschaft vom 18–22. Mai 1960 in Hamburg.)** ['The modern recognition and treatment of dermatomycoses with special reference to therapy with griseofulvin.' (Report on the mycological symposium at the 25th meeting of the German Dermatological Society, 18–22 May 1960, Hamburg.)]—*Bull. pharm. Res. Inst., Osaka 1960*, 29, pp. 16–21, 1960.

This symposium included: Janke (D.) [Serology of mycoses], Sternberg (T.) & McNall [Biochemistry and mode of action of griseofulvin], Gentles (J. C.)

[Pharmacological and biological aspects of griseofulvin], Fegeler (F.) [The present manifestation of dermatomycoses and their agents], Grimmer (H.) [Histopathology of onychomycosis and its significance for griseofulvin therapy], Kärcher (K. H.) [Pathogenesis of *Candida* mycosis], and Winkler [Clinical aspects and therapy of *Candida* mycoses].

462. Baxter (D. L.) & Carson (W. E.). **Griseofulvin therapy in chronic dermatophyte infections.**—*U.S. armed Forces med. J.*, **11**, 9, pp. 1001–1006, 1960.

AFEB [Armed Forces Epidemiological Board] official statement on the use of griseofulvin in superficial fungal infections.—*U.S. armed Forces med. J.*, **11**, 9, pp. 1054–1057, 1960.

463. De Fooz (G.) & Lapière (M.). **Un nouvel antibiotique antifongique en dermatologie : la griséofulvine.** [A new antifungal antibiotic in dermatology: griseofulvin.]—*Rev. méd. Liège*, **15**, 21, pp. 702–705, 1960.

After giving a table of the frequency of isolation of *Candida albicans* and the common dermatophytes at the Clinique Dermatologique, Univ. Liège, the authors briefly review griseofulvin therapy of dermatomycoses.

464. Further reports of the successful use of griseofulvin [cf. **4**, No. 271]:

a. Alban (J.). **Griseofulvin therapy in tinea capitis.**—*J. Pediat.*, **58**, 3, pp. 367–372, 4 fig., 1 graph, 1961.

[Children's Hosp., San Francisco, Calif.; 58 cases (*Microsporum audouinii, M. canis*). One patient, an 8-yr.-old Negro, experienced a serious toxic reaction in the form of leucopenia (which developed transiently in 8 others), and this disappeared with the cessation of treatment.]

b. Grandbois (J.) & Potvin (A.). **Griseofulvin treatment of superficial mycoses (including 7 cases of favus).**—*Canad. med. Ass. J.*, **83**, 27, pp. 1417–1423, 8 fig., 1960.

[Quebec City; 47 cases (*Microsporum canis, M. audouinii, Trichophyton schoenleinii* (7 cases favus, 1 onychomycosis), *Epidermophyton floccosum, T. rubrum*, and *T. mentagrophytes*).]

c. Sarkany (I.). **Valor clínico de la griseofulvina.** [Clinical value of griseofulvin.]—*Act. dermo-sifilogr., Madr.*, **51**, 6, pp. 267–270, 1960.

[Royal Free Hosp., London; 210 cases (94 *T*[*richophyton*] *rubrum*, 42 *T. mentagrophytes*).]

d. Meenan (F. O. C.). **The treatment of tinea capitis with griseofulvin.**—*Irish J. med. Sci.*, Sixth Ser., 423, pp. 129–132, 1961.

[St. Anne's and the Children's Hosp., Dublin [cf. **3**, No. 1279]; 27 cases, in children (2–12 yr.) (*Microsporum audouinii* 15, *M. canis* 5, *Trichophyton tonsurans* 6, *T. schoenleinii* 1).]

e. Bruaux (P.). **Traitement de quelques cas de teignes du cuir chevelu par griséofulvine.** [Treatment of some cases of tinea of the scalp with griseofulvin.]—*Ann. Soc. belge Méd. trop.*, **40**, 2, pp. 309–325, 1960. [Flem., Engl., Germ., Span. summ. *B.H.*, **36**, p. 36.]

[13 children (*Microsporum langeronii, Trichophyton* sp.).]

f. Cuesta (L.) & Dauden (C.). **Un caso de tiña microspórica de cuero cabelludo tratado con griseofulvin.** [A case of microsporic tinea treated with griseofulvin.]—*Act. dermo-sifilogr., Madr.*, **51**, 2, pp. 47–48, 1960.

464 g. NOGUER-MORÉ (S.). **La 'griseofulvine' en el tratamiento de los dermatomicosis. Primeros ensayos.** [Griseofulvin in the treatment of dermatomycoses. First experiments.]—*Act. dermo-sifilogr., Madr.*, **51**, 6, pp. 295–299, 1960.

[Hosp. de la Cruz Roja, Barcelona; 8 cases (*Epidermophyton, Trichophyton*).]

h. VINCENT (J.), NEEL (R.), & DROUHET (E.). **Traitement collectif des teignes par la griséofulvine en milieu scolaire fortement contaminé.** [Collective treatment of tineas by griseofulvin in a heavily contaminated school ambience.]—*Bull. Soc. Path. exot.*, **53**, 5, pp. 869–877, 4 fig., 1960.

[Institut Pasteur, Tangier, Morocco; 28 schoolchildren (*Trichophyton schoenleinii, T. violaceum, T. tonsurans*).]

i. VILANOVA (X.) & CASANOVAS (M.). **El griseofulvin en el tratamiento de las dermatofitosis.** [Griseofulvin and the treatment of dermatophytosis.]—*Act. dermo-sifilogr., Madr.*, **51**, 2, pp. 43–44, 1960.

[2 cases of tinea pedis (*Epidermophyton floccosum, Trichophyton rubrum*).]

j. PIERINI (D. O.) & MAZZINI (R. H. E.). **Dermatomicosis por Trichophyton rubrum.** [Dermatomycosis due to *T. rubrum*.]—*Arch. argent. Derm.*, **10**, 3, pp. 256–260, 1960.

[Argentina; 3 cases.]

465. FRIEDMAN (LORRAINE), DERBES (V. J.), & TROMOVITCH (T. A.). **Single dose therapy of tinea capitis.**—*Arch. Derm., Chicago*, **82**, 3, pp. 415–418, 1 graph, 1960. [13 ref.]

At Sch. Med., Tulane Univ., New Orleans, only 1 of 22 patients infected with *Microsporum audouinii* failed to respond to a single oral dose of 3 g. griseofulvin; the remaining 21 were cleared of infection as rapidly as 25 patients who received 1 g. every 1, 2, or 3 days for 28 days.

466. STEVENSON (C. J.) & DJAVAHISZWILI (N[INA]). **Chronic ringworm of the nails. Long-term treatment with griseofulvin.**—*Lancet*, **1**, 7173, pp. 373–374, 1961.

At St. John's Hosp. for Diseases of the Skin, London, 50 patients with chronic *Trichophyton rubrum* infections of the toenails and skin of the feet were treated with griseofulvin at 0·5 g. 3 times a day [**3**, No. 1775a]. After 1 yr. 16 were cured, while 34 still harboured the fungus in the nails (17), skin (4), or both (13). Treatment was continued for a further 3 months in 14, and 5 were cured. In the 21 patients thus cured infection recurred within 3 months in the nails of 5 and skin of 8.

By contrast, of 41 patients with infected fingernails 38 were cured within 1 yr. and there was no recurrence.

467. MCDANIEL (W. E.). **Kerion in tinea capitis due to M. audouini treated by griseofulvin. Report of two cases.**—*Arch. Derm., Chicago*, **82**, 3, p. 423, 1960.

At the Fayette County-Lexington Public Health Center, Lexington, Ky, 2 brothers, 2- and 3-yr.-old Negroes, developed kerion after receiving 250 mg. griseofulvin 3 times a day for 3½ weeks.

468. O'FARRELL (N. M.). **Allergic reaction to griseofulvin.**—*Arch. Derm., Chicago*, **82**, 3, p. 424, 1960.

At 4533 Coll. Ave., San Diego, Calif., a 5-yr.-old girl developed severe dermatitis after receiving 250 mg. griseofulvin 3 times a day for 1 week.

469. LAMB (J. H.), JONES (PHYLLIS E.), MORGAN (R. J.), EVERETT (M. A.), & PENROD (J. N.). **Further studies in light-sensitive eruptions.**—*Arch. Derm., Chicago*, **83**, 4, pp. 568–581, 1 col. pl., 1961. [24 ref.]

The cases herein reported from Med. Arts Building, Oklahoma City, include 2 in

males, 42- and 54-yr.-old, who developed an increased sensitivity to sunlight while on griseofulvin therapy for *Trichophyton rubrum* infections.

470. Epstein (W. L.) & Larson (M. A.). **Griseofulvin potentiation of colchicine toxicity.**—*J. invest. Derm.*, **36**, 1, pp. 5–6, 3 graphs, 1961. [8 ref.]

At Sch. Med., Univ. Calif., San Francisco, griseofulvin administered intraperitoneally in non-lethal doses (1–2 g./kg.) to mice receiving 1–2 mg./kg. colchicine produced a marked increase in mortality [**4**, No. 276]. Combined therapy with colchicine and griseofulvin in man should be pursued cautiously.

471. Ito (K.), Takeuchi (H.), & Tomomatsu (S.). **A study on griseofulvin. II. Dermatophyton relatively resistant to griseofulvin.**—*Bull. pharm. Res. Inst., Osaka*, 29, pp. 10–15, 1 graph, 5 fig., 1960. [7 ref.]

At Gifu med. Coll. and Pharm. Res. Inst., Osaka-Takatsuki, 5 rabbits were inoculated with a str. of *Trichophyton mentagrophytes* and 5 days later treatment with griseofulvin (60 mg./kg. daily *per os*) was started. After treatment for 4 days the fungus was re-isolated and inoculated into a further 5 rabbits which were treated similarly. This procedure was repeated several times, 7 groups of rabbits being used in all. The course of infection in these groups was compared with an untreated infection by the original str. Days needed for healing increased from 15–18 in the 1st treated group to 28–35 in the 7th, compared with 34–44 in the untreated animals. There was a corresponding increase in antibody titre, by complement fixation reaction, and a decrease in sensitivity of the fungus to griseofulvin *in vitro*.

472. Guilhon (J.) & Jolivet (G.). **Essais de traitement interne de la teigne microsporique des carnivores.** [Experiments on the internal treatment of tinea (microsporosis) of Carnivores.]—*Bull. Acad. vét. Fr.*, **33**, pp. 369–373, 1960. [*V.B.*, **31**, No. 669.]

At the École nat. vét. d'Alfort the experimental treatment of 10 cases of infection of dogs and cats by *Microsporum canis* with griseofulvin administered orally confirmed its activity against the fungus. The dosage should be at least 50 mg./kg./day for at least 1 month. This treatment completely cured 3 kittens, but lesions on dogs were more resistant.

473. Keep (J. M.). **Griseofulvin in the treatment of feline ringworm.**—*Aust. vet. J.*, **35**, p. 388, 1959. [Letter.] [*V.B.*, **30**, No. 1746.]

Writing from Univ. Sydney, the author describes a trial with griseofulvin which indicates that it is likely to prove effective against feline ringworm (*Microsporum canis*). Two kittens about 8 weeks old which had been naturally infected for about 1 month were given 1 oral daily dose of a $\frac{1}{4} \times 250$ mg. tablet of griseofulvin. By the 44th day, only a few facial hairs showed a small tip fluorescence, which gave no growth on culture, and ensuing cultures taken at random from the animals also proved negative.

474. Kelley (D. C.) & Anthony (H. D.). **Treatment of dermatomycoses in Chinchillas.**—*Vet. Med.*, **56**, 1, pp. 23–24, 1961. [*V.B.*, **31**, No. 1069.]

At Dept Vet. Med., Kansas agric. Exp. Sta., Manhattan, Kansas, 40 mg./kg. griseofulvin daily was considered effective for the prevention and treatment of experimental *Trichophyton mentagrophytes* infection in chinchillas.

475. Böhme (H.) & Ziegler (H.). **Untersuchungen über die Wirkung von Griseofulvin auf Microsporon canis.** [Investigations on the effect on griseofulvin on *Microsporum canis*.]—Ziegler (H.). **Untersuchungen über die Wirkung von Griseofulvin auf Microsporon canis.** [Investigations of the effect of griseofulvin

on *M. canis*.]—*Mykosen*, **3**, 3, pp. 57–69, 7 fig., 4 graphs, 1960; **4**, 1, pp. 19–29, 4 graphs, 1961.

Accounts of *in vitro* studies at the Hautklinik der Charité der Humboldt-Universität, Berlin.

476. Mello (A.). **Aspectos clínicos gerais das epidermomicoses.—Considerações em tôrno do emprêgo de um novo agente fungostático, ácido ω-etil mercúrio tio-undecanóico.** [General clinical aspects of epidermal mycoses—Considerations on the use of a new fungistatic agent, ω-ethylmercurithioundecanoic acid.]—*Cadern. Terapeut. Labor.*, **5**, 2, pp. 83–90, 11 fig., 1960.

At the Clinica Dermato-Sifiligráfica, Hosp. Municipal, Brazil, the author tested the above substance on 124 cases of skin mycoses (a selection of which are illustrated), chiefly produced by *Trichophyton gypseum* [*T. mentagrophytes*], *T. rubrum*, *Microsporum audouinii*, and *Malassezia furfur*. Complete cure was effected in 39 cases of intertriginous infections, but 6 cases of *Candida albicans* infection did not respond completely. Treatment of tinea was ineffective.

477. Inaba (K.). **Experimental study on hematogenous reinfection with Trichophyton mentagr., v. asteroides. III. Provoked flare up of 'healed' lesion due to previous skin inoculation with Trichophyton mentagr., v. asteroides, following intravenous reinfection with the Trichophyton. IV. Serological follow up of experimental trichophytid caused by hematogenous reinfection with Trichophyton mentagr., v. ast., using crude polysaccharide (from the Trichophyton mechanically disintegrated) as antigen.**—*Bull. pharm. Res. Inst., Osaka*, 30, pp. 1–10, 9 fig., pp. 11–19, 4 fig., 1961.

In further experiments [cf. **4**, No. 307] at Gifu med. Coll., and Pharm. Res. Inst., Osaka-Takatsuki, rabbits were infected cutaneously with *T. mentagrophytes* and allowed to heal spontaneously. Two weeks later they were injected intravenously with a suspension containing 20 mg. of the fungus. Within 24 hr. erythema occurred on the scar of the 'healed' primary lesion. Histological examination of biopsy specimens showed anaphylactoid haemorrhagic inflammation with leucocytoclasis, vascular pathology, and epidermal involvement. The reaction, which was less intense in the area around the scar, is regarded as possibly being an allergic response.

The 2nd paper reports on precipitation and complement fixation reactions of sera from 3 groups of rabbits: in the 1st group, rabbits with generalized trichophytid following intravenous reinfection with *T. mentagrophytes*, as above, there was a flare-up of serological reaction following reinfection, and the peak of antibody production was higher than in rabbits with primary skin infection only; in the 2nd group, in which a trichophytid reaction did not develop after reinfection, there was no flare-up; in the 3rd group, rabbits which received an intravenous injection only, without previous skin infection, the peak of antibody production was not as high as in the 1st group.

The method of extracting the antigen used, from mechanically disintegrated mycelium of *T. mentagrophytes*, is described.

478. Kashima (R.). **Experimental studies on experimental trichophytosis as seen from comparative exanthematology. VI. Fluorescent microscopical study of allergic reaction evoked by crude polysaccharide of Trichophyton mentagr., var. ast.**—*Bull. pharm. Res. Inst., Osaka*, 29, pp. 1–9, 3 fig., 1960.

At Pharm. Res. Inst., Osaka-Takatsuki, and Gifu med. Coll. a fluorescent microscopical study was made of the skin reactions evoked on the scars of healed lesions of *T. mentagrophytes* infection in rabbits by 4 fractions (S_1, S_2, S_3, S_4) of the crude polysaccharide extract (S) of *T. mentagrophytes* used in previous studies [**4**, No. 83]. There was no essential difference between the reactions evoked by the fractions,

but the intensity of inflammation was in the order $S > S_1 > S_2 > S_4 > S_3$. The content of protein or peptide of the fractions was in the same order.

479. Chattaway (F. W.), Toothill (C.), & Barlow (A. J. E.). **Intracellular free amino-acids of certain dermatophytes.**—*Nature, Lond.*, **190**, 4770, pp. 87–88, 1961. [10 ref.]

At Dept Biochemistry, Univ. Leeds, and Dept Derm. Royal Infirmary, Huddersfield, acetic acid extracts of the mycelium of strs. of *Microsporum canis*, *Trichophyton rubrum*, *T. mentagrophytes*, *T. verrucosum* var. *discoides* and *Epidermophyton floccosum* were examined for amino-acids by paper chromatography. Results showed the presence of a pattern of free amino-acids which was very similar for all the organisms, and the absence of any distinctive peptide component. The principal amino-acids found were glutamic acid, glutamine, aspartic acid, alanine, serine, and proline. These results are similar to those reported for *Aspergillus oryzae*, *A. flavus*, *Penicillium chrysogenum* and *Neurospora crassa*, but differ in the absence of any basic amino-acid or of glycine as major components.

480. McNall (E. G.), Sternberg (T. H.), Newcomer (V. D.), & Sorensen (L. J.). **Chemical and immunological studies on dermatophyte cell wall polysaccharides.** —*J. invest. Derm.*, **36**, 2, pp. 155–157, 1961. [16 ref.]

The method used at Dept Med., Univ. Calif., Los Angeles, for the isolation and chemical characterization of a high mol.-wt. polysaccharide fraction from the outer wall of *Trichophyton mentagrophytes* is described. The fraction consists of glucose and glucosamine in a 2:1 ratio and is probably a single, highly branched, polymeric molecule. It is antigenic, and induced the synthesis of antibodies when injected into chinchillas [**4**, No. 305]. Approximately $\frac{1}{3}$ of the antibodies was absorbed by *T. rubrum* cell wall polysaccharide which also consists of glucose and glucosamine.

481. Sukhenko (F. T.). Протеолитические ферменты ржавого и пушистого микроспорумов. Сообщение 2. [The proteolytic enzymes of the rusty and downy *Microsporum* spp. Report 2.]—Изв. Сибир. Отдел Акад. Наук СССР [*Izv. Sibir. Otdel. Akad. Nauk S.S.S.R.*], *1960*, 9, pp. 123–135, 1960. [18 ref.]

Further studies [**4**, No. 76] on the effects of temp. and of cations of Ag, Hg, Cd, and Co, and of formaldehyde and $NaNO_2$ on the proteinase activity of *Microsporum ferrugineum* and *M. lanosum* [*M. canis*] confirmed the previous suggestion that the proteolytic enzymes of these fungi are similar to papain, but differ from the proteinase of *Achorion* [*Trichophyton*] *schoenleinii*. The activity of the proteinase of *M. ferrugineum* increased when temp. was raised from 27 to 47° C.

482. Podgaĭnaya (Mme E. S.) & Sukhenko (F. T.). Аргиназная активность пушистого и ржавого микроспорумов, эпидермофитона и фузариев. [Arginase activity in *Microsporum canis*, *M. ferrugineum*, *Trichophyton interdigitale*, and *Fusarium* spp.]—Изв. Сибир. Отдел. Акад. Наук СССР [*Izv. Sibir. Otdel. Akad. Nauk S.S.S.R.*], *1959*, 11, pp. 73–80, 1959. [14 ref.]

At the Novosibirsk med. Inst. all the isolates exhibited arginase activity which varied with the sp. and str., and with the medium: it was higher on glucose peptone medium than in those on glucose casein. The arginase activity of the *F.* spp. was considerably higher than that of the *M.* spp. *T. interdigitale* on glucose peptone was closer to *F.* and on glucose casein was closer to *M.*

483. Zussman (R. A.), Vicher (E. E.), & Lyon (I.). **Arsine production by Trichophyton rubrum.**—*J. Bact.*, **81**, 1, p. 157, 1961.

At the Depts Microbiol. and Biol. Chem., Univ. Ill. Coll. Med., Chicago, arsine was produced in cultures of *T. rubrum* containing 0·006–0·0015 M arsenate. At

lower concs. arsine was scarcely detectable, and at higher ones fungal growth was inhibited. Arsine was not produced in the presence of arsenite.

484. Hejtmánek (M.). **Variability in assimilation properties of dermatophytes. II. The growth of Keratinomyces ajelloi on media with varied nitrogen source.**—*Acta Univ. Palack. Olomuc.*, **20**, pp. 5–20, 1960. [*Chem. Abstr.*, **55**, 8, col. 7550d, 1961.]

The 1st part of this report from Med. Fac., Palackého Univ. Olomouc, Czechoslovakia, appeared in the same journal, **18**, pp. 31–56, 1959. Using growth rate and dry wt. as criteria, 7 strs. of the fungus assimilated N sources in the following decreasing order: asparagine, casein hydrolysates, glutamic acid, urea, $(NH_4)_2 SO_4$, NH_4NO_2, and KNO_2. The morphology of the colonies varied extensively with the different sources and in some cases also with the particular str.

485. Biggio (P.). **Sulla reversione mediante coltura su capelli delle variazioni regressive di Trichophyton violaceum.** [On reversion by means of culture on hairs of regressive variations of *T. violaceum.*]—*Rass. med. sarda*, **63** (N.S. 12), 1, pp. 21–26, 2 fig., 1961. [Engl. summ. 6 ref.]

In serial cultures on hairs *in vitro* at Univ. Cagliari, Sardinia, to explore the possibility of securing reversion of the incapacity to produce pigment acquired by 4 strs. of *T. violaceum* in the course of transfers on culture media during 1 yr. or more after isolation, 1 str. developed partial pigmentation after 4 serial transplantations. The significance of this result is briefly assessed.

486. Keep (J. M.). **The viability of Microsporum canis on isolated cat hair.**—*Aust. vet. J.*, **36**, pp. 277–278, 1960. [*V.B.*, **30**, No. 3533.]

At Univ. Sydney, the viability of *M. canis* on hair from 3 cases of spontaneous feline ringworm kept at room temp. was 323, 315, and 422 days, respectively.

487. Lundell (E.), Meinhof (W.), & Rieth (H.). **Nachweis hautpathogener Bodenpilze in Finnland.** [Demonstration of pathogenic dermatophytes from soil in Finland.]—*Mykosen*, **3**, 4, pp. 136–140, 4 fig., 1960.

Lundell (E.), Thianprasit (M.), Meinhof (W.), & Rieth (H.). **Isolierung von Keratinomyces ajelloi mittels Haarköder aus Erde von Finnland.** [Isolation of *K. ajelloi* with use of hair-bait from soil in Finland.]—*Bull. pharm. Res. Inst., Osaka, 1961*, 30, pp. 20–25, 1961. [26 ref.]

Of 20 soil samples from S. Finland 14 contained *Keratinomyces ajelloi* (both perfect and imperfect states) and 3 *Trichophyton terrestre*. In 4 of the samples a fungus was found which resembled *Microsporum cookei* and differed from *Keratinomyces* in having acuminate macroconidia with rough walls.

In the 2nd paper it is stated that soil from poultry runs and peat were mainly negative.

488. Fischer (J. B.). **Onychomycosis caused by Scopulariopsis brevicaulis.**—*Canad. med. Ass. J.*, **83**, 24, pp. 1264–1265, 4 fig., 1960.

Of nearly 3,700 specimens examined at the Central Lab. Ont. Dept Health, Toronto, from 1947 to 1959, inclusive, 879 (24%) were infected by fungi, but *S. brevicaulis* was found in only 3 cases, all during the latter year. All the patients were men and the left great toenail was the only site of infection. In 1 the organism proved resistant to griseofulvin both *in vitro* and *in vivo*.

489. Banerjee (B. N.) & Okhandiar (R. P.). **The effect of humidity and temperature on superficial fungus infection : a critical study based on statistics.**—*Indian J. Derm.*, **6**, 1, pp. 13–18, 37, 3 graphs, 1960. [30 ref.]

At Calcutta Univ. Coll. Med. the incidence of [unspecified] tinea and pityriasis

versicolor [*Malassezia furfur*] was shown to be closely correlated with rises in atm. temp. and humidity, less so with wind velocity. In the case of moniliasis [*Candida* spp.] the correlation coefficient, though positive, was not as close as in the foregoing disorders.

The various factors involved in seasonal variation are discussed, with special reference to the function of hydration of the stratum corneum in predisposition to infection.

490. Belfort (E.), Lacaz (C. S.), & Sampaio (S. A. P.). **Tinea nigra palmaris. Registro do primeiro caso em São Paulo, com a descripção do agente etiologico.** [Tinea nigra palmaris. Report of the first case in São Paulo, with a description of the causal organism.]—*Rev. paul. Med.*, **57**, 6, pp. 386–397, 1960. [28 ref.]

The fungus was cultivated and identified as *Cladosporium werneckii* for which the name *Pullularia werneckii* is preferred. The publication is well illustrated with photographs and drawings showing morphological aspects of the fungus.

491. Costa (C. A.) & Costa (L. A.). **Tinha negra palmar em Belém do Pará.** [Tinea nigra palmaris in Belém, Pará.]—*Rev. Serv. Saúde publ. (Rio de J.)*, **11**, 1, pp. 219–224, 1 fig., 1960. [Engl. summ. *B.H.*, **36**, p. 349.]

Report of 3 cases in Brazil. Cultures were identified as *Cladosporium werneckii*.

492. Londero (A. T.) & Fischman (O.). **Pitiriase versicolor do couro cabelludo.** [Pityriasis versicolor of the scalp.]—*Hospital (Rio de J.)*, **58**, 3, pp. 577–581, 1960. [Engl. summ.]

In Santa María, Rio Grande do Sul, Brazil, the scalps of patients with pityriasis versicolor (*Malassezia furfur*) were carefully examined. Small, scaly areas of infection of the occipital area were found in 8 of 13 patients; 2 patients also showed lesions on the face [**3**, Nos. 667, 1459].

493. Rodriguez M. (J. D.). **Piedra en Ecuador.** [Piedra in Ecuador.]—*Mycopathologia*, **14**, 1, pp. 31–38, 7 fig., 1961. [Engl. summ.]

This study from Inst. Nacional de Higiene 'Leopoldo Izquieta Perez', Guayaquil, covers black and white piedra. Details of the asci and the ascospores of the former (*Piedraia hortai*) are given. The latter (*Trichosporon giganteum*), which is also described, occurs more rarely in S. America.

494. Belfort (E.), Dillon (N.), Lacaz (C.), & Sampaio (S. A. P.). **Cromomicose primitiva da face e do pescoço.** [Primitive chromoblastomycosis of the face and neck.]—*Rev. Hosp. Clin Fac. Med. S. Paulo*, **15**, 5, pp. 352–358, 1960. [Engl. summ.]

Report of a case due to *Phialophora pedrosoi*, lasting 20 yr. Local treatment with amphotericin B produced some amelioration.

495. Paula (Luiza de A.). **Onicomicoses e Fonsecaea pedrosoi Negroni var. cladosporioides Carrión.** [Onychomycosis and *F.p.* var. *cladosporioides* Carrión.]—*Publ. Inst. Micol. Univ. Recife* 290, 25 pp., 2 fig., 1960. [Engl., Germ. summ.]

A report of *F. p.* var. *cladosporioides* in 2 cases of onychomycosis. Apparently this is the 1st time a fungus of the chromoblastomycosis series has been studied in relation to this disease. A general discussion of the mycological significance of the genus *Fonsecaea* is given.

496. Fernandez-Baquero (G.) & Reaud Lescay (Berta). **Cultivo del Hormodendrum pedrosoi del material obtenido por lavado bronquial en cuatro enfermos**

de cromoblastomicosis. [The isolation of *Phialophora pedrosoi* from bronchial washings in four cases of chromoblastomycosis.]—*Bol. Soc. cubana Derm. Sif.*, **17**, 2–3, pp. 99–101, 1960.

At the Military Hosp., Havana, Cuba, 24 cases of chromoblastomycosis have been studied. Bronchial washings from 4 cases yielded *P. pedrosoi*; no lesions were discovered in the lungs by X-ray.

497. Zaragoza (F.). **Un caso de micetoma del pie.** [A case of mycetoma of the foot.]—*Dermatología, Méx.*, **4**, 2, pp. 152–155, 1960.

Nocardia brasiliensis was presumed to be the causal organism.

498. Travis (R. E.), Ulrich (Elizabeth W.), & Phillips (S.). **Pulmonary allescheriasis.**—*Ann. intern. Med.*, **54**, 1, pp. 141–152, 4 fig., 1961. [Interlingua summ. 50 ref.]

Infection of the lungs by *Allescheria boydii* in a 37-yr.-old male patient at the Veterans Administration Hosp., Memphis, Tenn., suffering from pulmonary sarcoidosis occurred after reported courses of antibiotics and prolonged corticosteroid therapy. This is stated to be only the 2nd case of pulmonary involvement by the fungus [cf. **3**, No. 673].

499. Bridges (C. H.) & Beasley (J. N.). **Maduromycotic mycetomas in animals —Brachycladium spiciferum as an etiologic agent.**—*J. Amer. vet. med. Ass.*, **137**, pp. 192–201, 14 fig., 1960. [*V.B.*, **30**, No. 3861.]

From Sch. Vet. Med., A. & M. College of Texas, College Station, a chronic granulomatous enlargement of the foot of a 3-yr.-old female cat, multiple small cutaneous and subcutaneous nodules (approx. 6–8 mm. diam.) scattered over most of the body except the neck and back of a 1-yr.-old horse, and the enlarged prescapular lymph nodes on one side of a 8-yr.-old shepherd-type dog are fully described. All 3 cases were diagnosed as of maduromycotic mycetoma. Micro-colonies of a fungus were demonstrated in the stain smears and tissue sections and from the 1st 2 cases *B. spiciferum* a fungus related to *Curvularia geniculata* [**3**, No. 1772] was repeatedly isolated in pure culture.

500. Drouhet (E.) & Segretain (G.). **Sensibilité à la griséofulvine et à l'amphotéricine B des agents des mycétomes fongiques.** [Sensitivity to griseofulvin and amphotericin B of agents of fungal mycetomata.]—*Bull. Soc. Path. exot.*, **53**, 5, pp. 863–869, 1960. [11 ref.]

At Institut Pasteur, Paris, griseofulvin partially inhibited the growth of 15 strs. of *Madurella mycetomi* at 0·62–20 μg./ml. Sabouraud's medium after 5 days' incubation and at 1·25–25 μg. after 10 days, while total suppression was effected at 5–50 μg. *M. grisea* (1 str.) and *Leptosphaeria senegalensis* (3) were practically unaffected by the antibiotic.

The growth of *M. mycetomi* and *L. senegalensis* was inhibited by amphotericin B at 0·78–3·12 μg./ml. during the 1st 5 days of incubation.

501. Carrión (A. L.), Silva Hutner (Margarita), Nadal (H. M.), & Belaval (María E.). **Maduromycosis. An unusual case with a description of the causative fungus.**—*Arch. Derm., Chicago*, **82**, 3, pp. 371–383, 14 fig., 1960. [*T.D.B.*, **58**, p. 258.]

A report from Dept Derm., Coll. Physicians and Surgeons, Columbia Univ., New York, and San Patricio VA Hosp., San Juan, Puerto Rico, of recurrent subcutaneous lesions with black grains on the leg of a 35-yr.-old coloured male Puerto Rican. The disease began in Korea. The causal organism was moist, black, and yeast-like at 20° C. and mycelial, with duvetous, grey to dark olivaceous colonies at 30° C.

The yeast phase consisted of unicellular or bicellular ovoid elements, sometimes with septa in 2 planes, with buds, attached by sterigmata, produced in succession at the poles. Conidia of the mycelial phase were numerous, ovoid to pear-shaped, and produced in 5 patterns, resembling those of *Sporotrichum*, *Cladosporium*, *Phialophora*, *Pullularia* and *Beauveria*. Griseofulvin therapy was ineffective.

502. Mauhin (J.). **Un cas d'aspergillose pulmonaire secondaire.** [A case of secondary pulmonary aspergillosis.]—*Rev. méd. Liège*, **16**, 3, pp. 65–73, 1961.

A detailed description is given of a case of pulmonary aspergillosis (*Aspergillus fumigatus*) secondary to tuberculosis in a 75-yr.-old man: it is compared with a case of primary aspergillosis. Both cases were seen at the Inst. de Clinique Médicale, Univ. Liège.

503. Saliba (A.), Pacini (L.), & Beatty (O. A.). **Intracavitary fungus balls in pulmonary aspergillosis.**—*Brit. J. Dis. Chest*, **55**, 2, pp. 65–71, 2 pl. (7 fig.), 1961. [20 ref.]

A discussion from District Two State Tuberculosis Hosp., Louisville, Ky, on the diagnosis and treatment of pulmonary aspergillosis [**4**, Nos. 315, 361]. Details are given of 6 cases (1 *Aspergillus fumigatus*, the others unspecified) including one with bilateral apical cavities with fungus balls [**3**, No. 1775c].

504. Allan (G. W.) & Andersen (Dorothy H.). **Generalized aspergillosis in an Infant 18 days of age.**—*Pediatrics*, **26**, 3 (Part 1), pp. 432–440, 4 fig., 1961. [16 ref.]

In the case of infection by *Aspergillus fumigatus* herein reported from the Coll. Physicians and Surgeons and the Babies Hosp., N.Y., the clinical course was deceptively benign and death occurred suddenly. The necropsy revealed extensive pulmonary lesions with widely disseminated embolic foci.

505. Gowing (N. F. C.) & Hamlin (Iris M. E.). **Tissue reactions to Aspergillus in cases of Hodgkin's disease and leukaemia.**—*J. clin. Path.*, **13**, 5, pp. 396–413, 19 fig. (5 col.), 5 graphs, 1960. [48 ref. *B.H.*, **36**, p. 133.]

Five case reports from Royal Marsden Hosp., London, of aspergillosis involving the lung (all 5), stomach (1), brain and meninges (1), and heart, kidneys, spleen, thyroid, and liver (1). *A. fumigatus* was isolated from post-mortem tissues of 3 cases.

506. Eggert (M. J.) & Romberg (P. F.). **Pulmonary aspergillosis in a Calf.**—*J. Amer. vet. med. Ass.*, **137**, pp. 595–596, 4 fig., 1960. [*V.B.*, **31**, No. 1060.]

Histological examination at Iowa State Univ., Ames, of lung specimens from a case provisionally diagnosed as tuberculosis in a 6-week-old calf showed characteristic infection by *Aspergillus fumigatus*, which was cultured. This is claimed as the 1st report of pulmonary aspergillosis in cattle since 1900 (L. Pearson & M. P. Ravenel, *J. comp. Med.*, **21**, pp. 451–465, 1900).

507. Francalanci (G.). **Sull'aborto micotico dei bovini.** [Mycotic abortion in Cattle.]—*Vet. ital.*, **10**, 4, pp. 278–291, 1959. [Fr., Engl., Germ. summ. 15 ref. *V.B.*, **29**, No. 3771.]

After reviewing the literature, the author describes an investigation at Ist. zooprofilattico sper. delle Venezie, (Univ. Padua) of 120 cases of bovine abortion, of which 15 were due to *Aspergillus fumigatus* and 1 to *Absidia corymbifera*. It could not be definitely established that infection entered through the genital organs, but feeding with maize, which readily becomes mouldy when left in the open, appeared to have played an important part.

508. Hörter (R.). **Aspergillus-Dermatomykose bei abortierten Rinderföten** [*Aspergillus* dermatomycosis in aborted bovine foetuses.]—*Dtsch. tierärztl. Wschr.*, **67**, 14, pp. 380–383, 2 fig., 1960. [Engl. summ.]

At the Veterinäruntersuchungsamt, Munster, Germany, the abortion of 2 foetuses, aged 6 and 7 months, was found to be caused by *Aspergillus fumigatus*. The hyphae attacked only the epidermis and placental membranes but they were conveyed to the intestinal tract by swallowing of the amniotic fluid.

509. Lundvall (R. L.) & Romberg (P. F.). **Persistent diarrhea in Colts associated with infection with Aspergillus fumigatus.**—*J. Amer. vet. med. Ass.*, **137**, pp. 481–483, 1960. [*V.B.*, **31**, No. 672.]

Three American Saddle Horse colts seen at Coll. Vet. Med., Iowa State Univ., Ames, are reported to have suffered from persistent diarrhoea for more than 4 months. Isolations from faecal and nasal cultures yielded *A. fumigatus*. No significant bacteria were identified. The final treatment (of several) was nystatin boluses (200,000 units daily for 9 days) and the faeces gradually became more firm over a period of several weeks.

510. Hellmann (E.). **Seuchenartiger Verlauf einer Pneumomykose bei Eintagsküken.** [Pneumonomycosis in day-old Chicks.]—*Berl. Münch. tierärztl. Wschr.*, **72**, 23, pp. 465–467, 2 fig., 1959. [Engl. summ. *V.B.*, **30**, No. 2146.]

This outbreak, reported from Inst. für Veterinär-Hygiene, Freie Univ., Berlin, occurred among 745 chicks raised on a litter of shavings and sawdust. Within 4 days of exposure to the litter 97 died. Total losses were 22%. *Aspergillus fumigatus* and *Mucor* sp. were isolated.

511. Fukui (M.) & Yasuda (J.). **Serological studies on Aspergillus fumigatus.**—*Mycopathologia*, **14**, 1, pp. 39–54, 1 graph, 1961. [27 ref.]

At Osaka Univ., Japan, an extract was obtained by repeated cryolysis of acetone-dried mycelia of *A. fumigatus* killed with formalin. High titre immune serum was readily obtained by immunizing rabbits with this extract. F I antigen prepared from mycelial extract by alcoholic precipitation showed species-specificity when examined by the precipitin test. F II, prepared from F I by chloroform-butanol treatment, had no more antigenic activity than F I. F I could be used as antigen in the skin test with infected rabbits when the final reading was based on redness (over 5 mm. diam.) 36 hr. after injection.

512. Letterman (G. S.) & Schurter (Maxine). **Reconstructive surgery in the treatment of blastomycosis.**—*Sth. med. J.*, **53**, 10, pp. 1217–1219, 3 fig., 1960.

Description of the treatment applied in a case of facial infection by *Blastomyces dermatitidis* following a razor cut.

513. Menges (R. W.). **Blastomycosis in animals. A review of an analysis of 116 canine cases.**—*Vet. Med.*, **55**, pp. 45–54, 9 fig., 1 map, 1 graph, 1960. [41 ref.]

This analysis from the Communicable Disease Center, Kansas City, showed that all the canine cases of *Blastomyces dermatitidis* infection had occurred in the E. half of the U.S.A. Of 83 cases 67% were males, 33% females. The majority of the cases occurred in dogs under 3 yr. old. The max. incidence was at 2 yr. in contrast to the max. human incidence at 50–54 yr., of which the canine equivalent is 8½ yr. The symptoms of canine blastomycosis are briefly reviewed; the lungs, lymph nodes, and skin are most commonly involved.

514. McDonough (E. S.), Ajello (L.), Ausherman (R. J.), Balows (A.), McClellan (J. T.), & Brinkman (Sherry). **Human pathogenic fungi**

recovered from soil in an area endemic for North American blastomycosis.—*Amer. J. Hyg.*, **73**, 1, pp. 75–83, 1 pl., 1961. [27 ref.]

A report from the Communicable Disease Center, Atlanta, Ga, of an attempt to isolate *Blastomyces dermatitidis* from soil, wood, and other materials from areas in the Lexington, Ky region where canine and human victims of N. American blastomycosis had presumably contracted their infections. Both indirect isolation by mouse inoculation and direct isolation by culture on various media were attempted. None of the 842 samples examined yielded *B. dermatitidis* [see below] but other fungi isolated included *Allescheria boydii* (46 times) from soils enriched with manure and other nitrogenous materials, *Candida albicans* (1) from a chicken coop, *Cryptococcus neoformans* (10) from chicken houses and a tobacco barn, *Histoplasma capsulatum* (36) from chicken houses and well-rotted human manure, *Keratinomyces ajelloi* (55), *Microsporum cookei* (5) from soil in a dog pen and a dog house, and *M. gypseum* (163) from a wide variety of soils but only 1 of 134 samples from chicken habitats. Macroconidia of the last 3 fungi were detected in several samples. All the fungi except *C. albicans* are considered to be well established components of the region's soil mycoflora.

515. Denton (J. F.), McDonough (E. S.), Ajello (L.), & Ausherman (R. J.). **Isolation of Blastomyces dermatitidis from soil.**—*Science*, **133**, 3459, pp. 1126–1127, 1961.

At the med. Coll. Ga, Augusta, *B. dermatitidis* was isolated from soil for the 1st time from a soil specimen collected in Oct. 1958 from the earth floor of a stripping shed attached to a tobacco barn near Lexington, Ky [see above]. The shed had been used in 1956 to shelter a dog affected with blastomycosis. A soil suspension in normal saline containing penicillin (1,000 units/ml.) and streptomycin (1 mg./ml.) was inoculated together with a suspension of *Mycobacterium fortuitum* as an adjuvant into the tail vein of adult white Swiss mice which 3 weeks later were killed and cultures made from the lungs, liver and spleen. Pathogenicity tests showed the isolate to be virulent.

516. Roberts (F. B.). **Recovery from monilial septicemia.**—*Canad. med. Ass. J.*, **83**, 16, pp. 857–860, 1960. [21 ref.]

The 7th recorded case of spontaneous recovery from septicaemia caused by *Candida albicans*, in a 16-yr.-old girl, is reported from Toronto, with a general description of the pathogenesis of the disease and the various types of infection associated with it.

517. Stenderup (A.), Bichel (J.), & Jensen (K. B.). **Øsofagusmoniliasis behandlet med amphoterecin B.** [Oesophageal moniliasis treated with amphotericin B.]—*Ugeskr. Laeg.*, **121**, 29, pp. 1124–1127, 1959.

Five cases of *Candida albicans* infection of the oesophagus are reported from Aarhus Univ., Denmark, all of which responded to treatment with amphotericin B in dosages varying from 12–18 mg. daily for a period of 5–12 days.

518. Findlay (C. W.) & Kleinfeld (G.). **Monilial empyema treated successfully with intrapleural instillations of amphotericin B.**—*J. thorac. Surg.*, **38**, 2, pp. 244–247, 1 graph, 1959.

At F. Delafield Hosp., New York, a 54-yr.-old man who became infected by *Candida albicans* after treatment with antibiotics and repeated thoracenteses and thoracotomy for a *Staphylococcus aureus* empyema which developed after operation for bronchial carcinoma, was cured by 2 instillations of amphotericin B at 15 and 20 mg.

519. Persellin (R. H.), Haring (Olga M.), & Lewis (F. J.). **Fungal endocarditis following cardiac surgery.**—*Ann. intern. Med.*, **54**, 1, pp. 127–134, 1 fig., 1 graph, 1961. [Interlingua summ. 20 ref.]

Candida parakrusei was the fungus responsible for the development of septicaemia in a 43-yr.-old male patient at Passavant Memorial Hosp., Chicago, following aortic valvulotomy.

520. Hyun (B. H.), Dawson (Elizabeth A.), & Pence (R. E.). **Bacterial and mycotic endocarditis following cardiac surgery. Report of a case.**—*J. thorac. Surg.*, **35**, 3, pp. 298–304, 3 fig., 1958. [23 ref.]

A fatal case of bacterial (*Staphylococcus aureus*) and mycotic (*Candida albicans*) endocarditis [**3**, No. 2136] following circumferential suture of the mitral ring in a 32-yr.-old man is reported from the Presbyterian Hosp., Philadelphia, Pa, and the literature is reviewed.

521. Basu (Rekha), Basu (N.), & Banerjee (A. K.). **Incidence of Candida in the oral cavity.**—*Bull. Calcutta Sch. trop. Med.*, **9**, 1, pp. 20–21, 4 tables, 1961. [3 ref.]

Of 112 healthy adults 28·5% harboured *Candida* (16·9% *C. albicans*). For 54 healthy children, 66 undernourished children, and 56 diabetic patients the corresponding percentages were 27·7 (22·2), 77·01 (51·5), and 46·4 (30·3), respectively. Of 27 adults, 14 healthy, and 20 undernourished children showing oral signs of moniliasis all yielded *C. albicans*.

522. Kaul (K. K.), Shah (P. M.), & Pohowalla (J. N.). **Oral moniliasis in the newborn and neonatal morbidity.**—*Indian J. Pediat.*, **27**, 147, pp. 115–124, 1960. [14 ref.]

At Dept Pediatrics, M.G.M. med. Coll., Indore, oral swabs were taken from 713 unselected newborns and examined microscopically and by culture on Nickerson's medium, for the presence of *Candida*. Isolates were typed by the fermentation of glucose, maltose, sucrose, and lactose. Positive cultures were obtained from 113 cases of which 29 developed thrush before discharge from hospital. The incidence of infection was higher in prematures. Diarrhoea was the most frequent complication. The incidence of morbidity and mortality was higher in culturally positive cases. Infection occurred most frequently in artificially fed infants.

C. tropicalis (69) and *C. pseudotropicalis* (16) were most frequently isolated and responsible for clinical thrush, followed by *C. albicans* (7, only 1 case of thrush), *C. guilliermondii* (11), *C. krusei* (8), and *C. stellatoidea* (2).

523. Goldman (H. J.), Littman (M. L.), Oppenheimer (G. D.), & Glickman (S. I.). **Monilial cystitis—effective treatment with instillations of amphotericin B.**—*J. Amer. med. Ass.*, **174**, 4, pp. 359–362, 1960. [18 ref.]

At Mt Sinai Hosp., New York, 2 59-yr.-old males (1 diabetic) with *Candida albicans* infections of the urinary tract, were successfully treated with bladder instillations of amphotericin B at 15 mg./day. The presence of over 1,000 *Candida* colonies/ml. urine is considered to indicate significant clinical infection.

524. Silveira (J. S.) & Correia (J. U.). **Fungos em fezes — Análise de 143 mulheres — Sintomas, freqüência e terapêutica com cabimicina.** [Fungi in faeces. Analysis of 143 Women. Symptoms, incidence and treatment with cabimycin.] —*Hospital* (*Rio de J.*), **58**, 2, pp. 333–339, 1960. [Engl., Germ. summ.]

At Univ. Recife, Brazil, fungi were found in the faeces of 123 patients, *Candida krusei*, *C. albicans*, *C. tropicalis*, *Geotrichum candidum*, and *C. parapsilosis* being the

most frequent, in that order. Satisfactory control was obtained with trichomycin (cabimycin) treatment.

525. Batista (A. C.) & Pereira (V.). **Infectação do líquido amniótico da Mulher por fungos leveduriformes.** [The infection of the amniotic liquid of Woman by yeast fungi.]—*Publ. Inst. Micol. Univ. Recife*, 243, 39 pp., 5 fig., 1960. [Engl., Germ. summ.]

From 55 women examined between the 8th and 9th month of pregnancy 12 positive samples of amniotic liquid contained yeast fungi identified as follows: *Candida albicans*, *C. krusei*, *C.* sp., *Torulopsis candida*, *Pullularia pullulans* (1 isolate of each), *C. guilliermondii* (3), and *C. parapsilosis* (4). Of the babies born to the mothers who supplied the amniotic liquid 3 had conjunctivitis and mycotic vulvovaginitis, 2 intensive mycotic vulvovaginitis, 1 mycotic vulvovaginitis and epidermal lesions, 1 mycotic balanitis, and 5 mycotic stomatitis.

526. Kuprowski (Marian). **Zur Pathogenese und Morphologie der Moniliasis der Hühnervögel.** [On the pathogenesis and morphology of moniliasis in Poultry.] —*Dtsch. tierärztl. Wschr.*, **67**, 7, pp. 185–189, 2 fig., 1960. [Engl. summ.]

At the Vet.-Med. Fac. Agric. Coll., Wrocław (Breslau), Poland, the 3 recognized forms of infection by *Candida albicans*—thrush, blackbead, and toxic—were produced by inoculation experiments on turkeys, the best results being secured by the use of birds a few days old and material from the organs of diseased rabbits.

Gram+ vegetative forms of the fungus were unmistakably revealed in slides stained by a modification of the Kühne-Weigert method. The ovoid structures in the blood-vessels of the large parenchyma, hitherto described as blastospores, proved to be erythrocytic nuclei without a plasmatic margin. Although microscopic examination disclosed no developing fungal elements in slides from the liver, kidneys, spleen, and lungs, their presence therein was confirmed by cultures.

C. albicans causes β-haemolysis in glucose-blood agar at a temp. range of 38·5–44° C., the production of haemolysins being dependent on mycelial growth. The absence of marked post-mortem changes and the simultaneous presence of mycelia in the crop mucosa is regarded as evidence that the pathogenesis of the toxic form of moniliasis is determined primarily by the haemolytic properties of the fungus.

527. Clarke (R. T. J.) & Di Menna (Margaret E.). **Yeasts from the bovine rumen.**—*J. gen. Microbiol.*, **25**, 1, pp. 113–117, 1961. [10 ref.]

At the New Zealand D.S.I.R. Plant Chemistry Div., Palmerston North, and Soil Bureau, Wellington, yeasts isolated (at 39° C. on glucose peptone agar of pH 4) from the rumen contents of cows [see below] included *Candida albicans*, *C. tropicalis*, *C. krusei*, *C. rugosa*, *Trichosporon cutaneum*, *T. sericeum*, *Rhodotorula glutinis*, *R. mucilaginosa*, and *R. macerans*. In general, non-fermenting yeasts were isolated from hay-fed cows, and fermenting yeasts from cows fed on fresh clover. Yeasts which grow at 39° C. were not isolated from samples of feed: no yeasts were found on clover; *Cryptococcus laurentii*, *C. luteolus*, *Torulopsis ingeniosa* and *Rhodotorula glutinis* were recovered from pasture samples, and *R. macerans* and *R. mucilaginosa* from hay.

528. Clarke (R. T. J.). **Rumen Candida species and bovine mastitis.**—*N.Z. vet. J.*, **8**, p. 79, 1960.

A preliminary account of **4,** No. 527.

529. Saez (H.). **Champignons isolés du poumon de quelques mammifères sauvages morts en captivité.** [Fungi isolated from the lung of some wild animals which died in captivity.]—*Parassitologia*, **2**, 3, pp. 353–358, 1960. [9 ref.]

A list is given of fungi isolated from different organs of 37 wild animals aged from

2 months to some yr. which died at the Parc zoologique, Paris, showing the name (Fr. and Lat.) of the host, the organs examined, whether culture was negative or positive, and the name of the fungus found.

Among the other records are: *Torulopsis famata* from the kidney of a 5-yr.-old female baboon (*Papio papio*) with signs of multiple traumatism; *Candida parapsilosis*, *T. famata*, and *C. pelliculosa* from the lung and the intestinal contents of a young giraffe, a baboon, and a chimpanzee (*Pan troglodytes*), respectively.

In 42 mammals examined, only 1 case of *C.* infection of the lungs was noted, and that was an infection by *C. albicans* in a 4-yr.-old male *Macaca sylvana*. It is usual, however, to find fungi in the lungs, even pathogenic spp. such as *Aspergillus fumigatus*, as occasional occupants.

530. Van Swijndregt (L. M.), De Rom (R.), Thiéry (M.), Daskalides (J.), & Rappe (J.). **Le traitement de la candidase vaginale par la pimaricine, un nouvel antibiotique fongicide.** [Treatment of vaginal candidiasis with pimaricin, a new fungicidal antibiotic.]—*Brux.-méd.*, **41**, 13, pp. 421–424, 1961. [Flem., Engl. summ.]

Of 31 pregnant women treated for infection by *Candida albicans* at the Clinique Gynécologique, Gand [Ghent], Belgium, by the local application of pimaricin (Nederlandse Gist- en Spiritusfabricken, Delft), 16 (50%) were reckoned to be completely cured (judged by both symptomatic and parasitological criteria), 5 (16) symptomatically cured, and 10 (34) not benefited, the corresponding figures for the non-pregnant group of 19 being 16 (85%), 2 (10), and 1 (5), respectively.

531. Lambotte (R.). **Activité de divers antibiotiques sur Candida albicans et Trichomonas vaginalis.** [The activity of various antibiotics on *C. albicans* and *T. vaginalis*.]—*C.R. Soc. Biol., Paris*, **54**, 5, pp. 1113–1114, 1960.

At the Laboratoire de Microbiologie générale et médicale, Univ. Liège, Belgium, trichomycin was more active than nystatin *in vitro* against *C. albicans* (1·9 μg./ml. tolerated compared with 7·8 for nystatin). Iturin, pimaricin, and various unnamed products of *Bacillus subtilis* were shown to be less active than nystatin.

532. Biguet (J.), Havez (R.), Tran van Ky, & Degaey (R.). **Étude électrophorétique, chromatographique et immunologique des antigènes de Candida albicans. Caractérisation de deux antigènes spécifiques.** [An electrophoretic, chromatophoretic and immunologic study of the antigens of *C. albicans*. The characterization of two specific antigens.]—*Ann. Inst. Pasteur*, **100**, 1, pp. 13–24, 6 fig., 1961. [17 ref.]

Working at the Laboratoires de Parasitologie et de Biochimie pathologique, Faculté mixte de Médecine et de Pharmacie, Lille, the authors prepared a proteic antigen of *C. albicans* rich in hexoses. The material was fractionated by gel and starch electrophoresis, by precipitation, and by chromatography on diethyl-aminoethyl cellulose. Its antigenic structure, as demonstrated by gel immunoelectrophoresis, showed 9 fractions, 2 of which were specific to *C. albicans*. The remaining antigens were common to *C. albicans* and 7 other *C.* spp. It is concluded that the method is too complex and time-consuming to be of much use in the identification of yeasts, but it is believed that its application can give new taxonomic information and might be useful in the preparation of specific antigens.

533. Elinov (N. P.) & Nikitina (Mme G. A.). К оценке аллергенных свойств гаптенов из дрожжеподобных грибков рода Кандида в эксперименте и клинике. [Experimental and clinical assessment of the allergic properties of haptens from yeast-like fungi of the genus *Candida*.]—Вестн. Дерм. Вен.

[*Vestn. Derm. Ven.*], *1960*, 3, pp. 17–20, 1960. [Abs. from *Med. referat. Zh. I*, **4**, 8, p. 113, 1960.]

A description of the technique for the preparation of a skin-testing extract of *C. albicans*. On the basis of data obtained with rabbits and with the study of 102 cases of moniliasis, dermatomycosis, and other skin diseases, the use of the extract is recommended for assessing the reaction of the infected subject and, to a lesser extent, for diagnosis, supplemented by other clinical and laboratory studies.

534. Aksoycan (N.), Le Minor (L.), & Le Minor (S.). **Antigènes communs entre le Candida et les Salmonella-Arizona.** [Common antigens of *C.* and *S.* —Arizona.]—*Ann. Inst. Pasteur*, **99**, 5, pp. 723–728, 1960. [Engl. summ. *B.H.*, **36**, p. 133.]

It is reported jointly from the Faculté de Médecine, Ankara, Turkey, and the Inst. Pasteur, Paris, that *C. albicans*, *C. guilliermondii*, and *C. tropicalis* are strongly agglutinated by anti-*S.* 6·7 and 0·41 O-sera. Conversely, anti-*C. tropicalis* serum agglutinates suspensions of *S.* 6·7, 6·8, 6·14, 24·8, 20, and 41, while 6·7 and 41 are agglutinated by anti-*C. guilliermondii*, and 6·7 and 8·20 by anti-*C. albicans*. The same 3 sera and anti-*C. stellatoidea* also agglutinate certain *Arizona* O suspensions.

No comparable antigenic relationship was demonstrated between *C. krusei* and *C. parakrusei* on the one hand, and *S.* on the other.

From the results of saturation tests it appears that the agglutinations are principally due to minor antigens which are not included in the antigenic tables used for the serological diagnosis of *S.* and *A.*

535. Caroli (G.) & Di Biase (C.). **Modificazioni morfologiche e citochimiche in Candida albicans stadi diversi di sviluppo culturale.** [Morphological and cytochemical modifications in *C. albicans* in various stages of cultural development.]—*Riv. Ist. sieroterap. ital.*, **35**, 4, pp. 491–497, 4 fig., 1961. [20 ref.]

At the Istituto di Igiene, Univ. Bari, *C. albicans* in the early stages of growth on Sabouraud's agar with and without glucose, Sabouraud's broth, and potato infusion, appears in the form of actively budding oval blastospores, gradually increasing in size and becoming rounded. In older cultures they are swollen and numerous vacuoles develop with degeneration. The formation of more or less elongated pseudomycelia and chlamydospores is almost exclusively confined to certain media, e.g. potato infusion.

The cells are usually uninuclear. In the initial phase the nucleus is irregular in form and discernible only after acid or enzymatic hydrolysis, but at a later stage, coinciding with a decrease in cytoplasmic ribonucleic acid, it can be readily demonstrated without previous treatment. The max. quantity of volutin developed after 6–24 hr. Glycogen granules are most abundant in the youngest elements (24–48 hr.) of cultures containing glucose and subsequently disappear. Droplets of neutral fat occur at all stages but especially in older cells, suggesting a possible connexion with degeneration.

536. Batista (A. C.), Silveira (J. S.), & Coelho (R. P.). **Debaryomyces artagaveytiae n.sp. assinalado em secreção genital da Mulher.** [*D. artagaveytiae* Batista, Silv., & Coelho isolated from the genital secretion of a Woman.]—*Mycopathologia*, **14**, 1, pp. 19–23, 2 fig., 1961. [Engl. summ.]

The yeast *D. artagaveytiae*, found in the genital secretion of a woman at Inst. de Micologia, Univ. Recife, Brazil, is characterized by its ability to assimilate (but not ferment) glucose, galactose, saccharose, and maltose. There is no mycelium but asci

containing 1–4 globose ascospores are developed after isogamic conjugation. The patient was successfully treated with colpomycine.

537. Batista (A. C.) & Coelho (R. P.). **Endomycopsis clamitans n.sp.**—*Publ. Inst. Micol. Univ. Recife* 242, 13 pp., 5 fig., 1960. [Part II. Engl., Germ. summ.]

E. clamitans Batista & Coelho, isolated from epidermal lesions of a man, is described from Inst. Micologia, Univ. Recife, Brazil, as having true and pseudomycelium with blastospores globoid and ovoid, 2–4 μ diam., and cylindriform, stalagmoid, limoniform or fusiform, 1·5–3 × 4–7 μ. It does not ferment sugar, but assimilates glucose, galactose, saccharose, maltose, and KNO_3. The colonies are white, ashen or brownish with a smooth or cerebriform surface. On Gorodkowa medium it forms ellipsoid or oblong asci 5–9 × 3–4 μ containing 1–4 globoid to ovoid ascospores, 1–2 μ diam.

538. Batista (A. C.), Campos (S. T. C.), & Coelho (R. P.). **Endomycopsis dermatensis n.sp., isolado de lesões epidermicas do Homem.** [*E. dermatensis* Batista, Campos, & Coelho isolated from human skin lesions.]—*Publ. Inst. Micol. Univ. Recife* 178, 13 pp., 5 fig., 1960. [Engl., Germ. summ.]

This paper from Inst. Micologia, Univ. Recife, Brazil, describes *E. dermatensis*, isolated from a man with extensive erythematous lesions on the inner upper thigh. The fungus produces pseudo-mycelium and mycelium with globoid and ovoid blastospores 2–4 × 2–6 μ, and asci in Gorodkowa medium with 1–8 globoid ascospores. It ferments glucose and galactose, and assimilates glucose, galactose, and saccharose; KNO_3 is not assimilated.

539. Batista (A. C.) & Coelho (R. P.). **Endomycopsis interdigitalis n.sp.**—*Publ. Inst. Micol. Univ. Recife* 241, 11 pp., 2 fig., 1960. [Engl., Germ. summ.]

A description of *E. interdigitalis* Bat. & Coelho, from male interdigital lesions, producing pseudo- and true mycelium, with blastospores 2·5–7 × 2·5–10 μ, and globose to subglobose asci 1–4 spored, 3–8·5 μ diam. The ascospores are globose to short oval, 1–2 μ diam. The fungus ferments glucose, galactose, and saccharose, assimilates glucose, saccharose, galactose, maltose, lactose, and ammonium sulphate but not nitrate.

540. Louria (D. B.), Greenberg (S. M.), & Molander (D. W.). **Fungemia caused by certain nonpathogenic strains of the family Cryptococcaceae. Report of two cases due to Rhodotorula and Torulopsis glabrata.**—*New Engl. J. Med.*, **263**, 25, pp. 1281–1284, 1 graph, 1960. [17 ref.]

In 1 of the cases herein reported from Bellevue Hosp., N.Y., *R.* sp. induced symptoms simulating those of acute Gram — sepsis, culminating in the rapid clinical deterioration and death of the 47-yr.-old female patient. The infection caused by *T. glabrata* in a 50-yr.-old man, already dying of gastrointestinal carcinoma, was considerably less severe.

541. Negroni (P.), Quintana (J. C.), & Piccico (A.). **Trichosporon cutaneum aislada de un caso de queratitis del Perro.** [*T. cutaneum* isolated from a case of keratitis in a Dog.]—*An. Soc. cient. argent.*, **170**, 1–2, pp. 22–27, 3 fig., 1960. [Engl. summ.]

A case of mycotic keratitis caused by *T. cutaneum* in a 3-yr.-old collie was cured with local antimycotic treatment and intravenous lugol injections, but an almost total bilateral corneal opacity remained. The dog had been treated with antibiotics and cortisone for distemper and this is thought to have left a predisposition to the mycotic infection.